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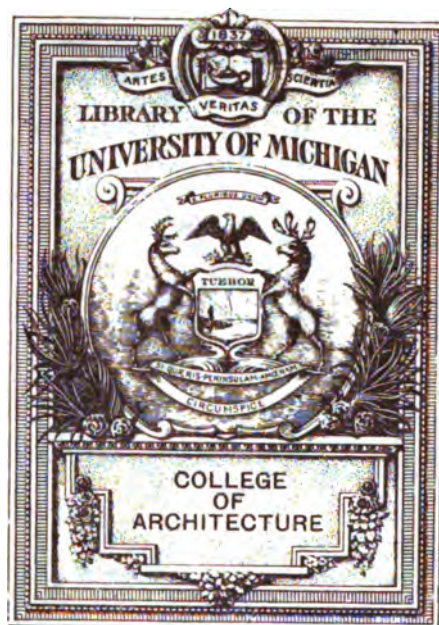
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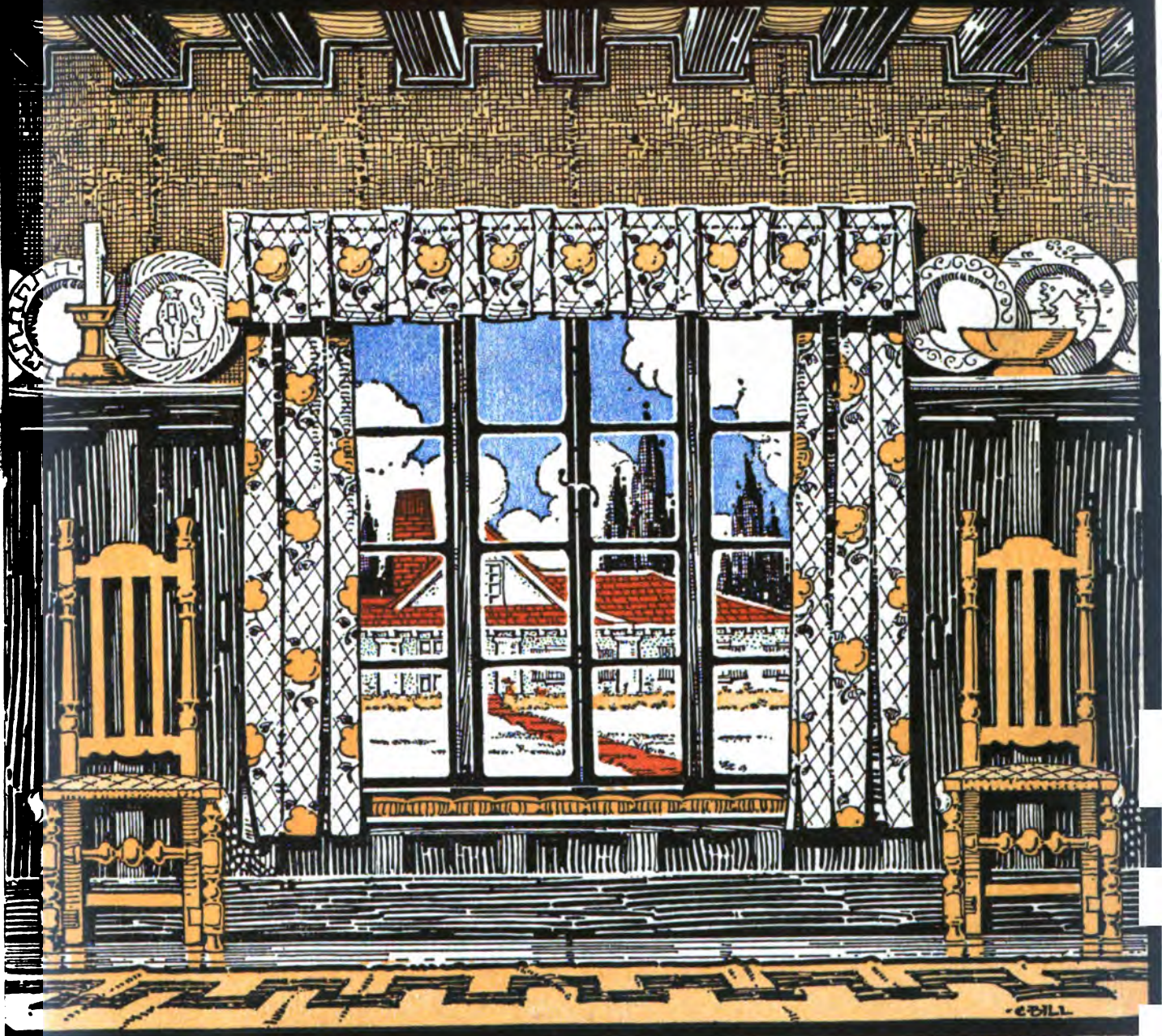








# THE NATCO



# BUNGALOW







# The Natco Bungalow

FOR FOUR THOUSAND DOLLARS

ATTRACTIVE  
ECONOMICAL  
D U R A B L E  
FIREPROOF

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PRICE, FIFTY CENTS

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Published for the  
NATIONAL FIRE PROOFING COMPANY  
=  
PITTSBURGH



BY ROGERS AND MANSON COMPANY  
BOSTON



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1913



# The Natco Bungalow

## FOREWORD

THE bungalow of to-day is not the bungalow of other days, of other times and places. At least this is true of the modern American bungalow. The original bungalow—a one-story affair perched high above ground on poles it may be—was but the seed from which has grown the modern bungalow. This particular type of house has found its greatest development here in America, and one will find bungalows galore in every State in the Union. Just as it is true of most things one finds in this type of dwelling, bungalows and bungalows. They may be mere shacks, or they may be well designed, well built, dignified houses. There are in America bungalows ranging in cost from three hundred to thirty thousand dollars. Some are of one story, others of one and a half stories and still others of two stories. Generally speaking it is, or is not, a bungalow according to the feeling—expression—in the design.

There is probably no one type of house of which so many are being built to-day throughout the country as the bungalow. In planning a new home it is a word to conjure with. It seems to imply coziness, simple beauty in form, easy administration and economy in construction. And yet if it is to be one's home it should not be counted a luxury alone; it should be so designed and built that it may be depended upon as an asset,—something which for a long period will have a market value commensurate with its original cost. Another matter which should be given serious consideration is that of maintenance or up-keep—this is of vital importance—for a poor house is like a poor horse, it can soon eat its own head off.

The purpose of this book is primarily to show that bungalows, or small houses, can be, and have been, built of a material which is reasonable in initial cost, is easily handled by the builder, which will insure a home that is practically safe from fire, will be cooler in summer and warmer in winter than if built of wood or plaster, and which reduces to a minimum the cost of up-keep.



The material recommended is Natco Hollow Tile. Here is a material which is manufactured and guaranteed by probably the largest burnt clay manufacturing company in the world. Within the past five years the use of this tile for exterior walls of houses—these exterior walls are usually given a finishing coat of plaster—has increased enormously. In every part of the country, north, east, south and west there may be found scores if not hundreds of Natco Hollow Tile houses.

The design of a house is a matter of the very greatest importance, especially if it is to be built of imperishable materials. A good design is like some other things, it improves with age,—it contributes to the value of the house as an asset.

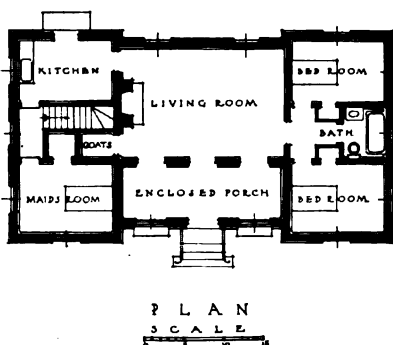
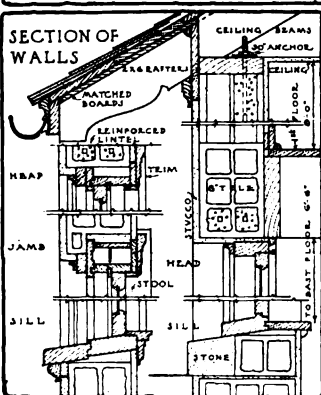
It was for the purpose of encouraging good design and good construction that a competition was recently held, the problem for which was a Natco Bungalow to cost four thousand dollars. Many of the leading architectural draftsmen of the country entered into this competition, and the jury—composed of well-known architects from different parts of the country—after awarding Prizes and Mentions assisted in the selection of a number of worthy designs for presentation in this book. These designs are given in the following pages, after which there are shown a number of small houses which have recently been built of Natco Hollow Tile by well-known American architects.







DRAWN BY NIGHT  
1912



### THE CVBAGE

PORCH 14x20.25x7.75x16 = 427.76  
WINGS 2x13.5x26x18.0FT = 1353.8  
LIVING RM 15.5x20.25x19 = 5963.63  
TOTAL 19920.39 CUBIC FEET—  
TOTAL COST AT 20CTS = 3985.88

### ITEMS OF COST

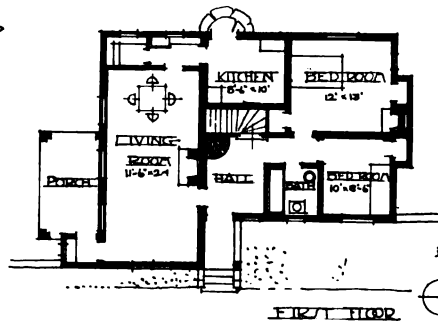
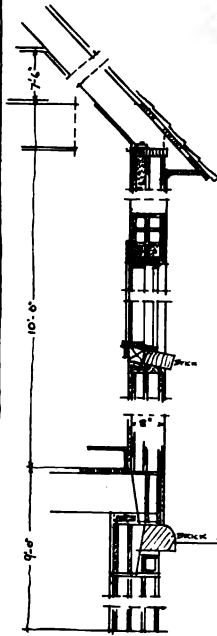
EXCAVATING	\$140
NATCO TILE	723
PLASTERING	310
LUMBER & CARPENTRY	750
MILL WORK	572
PAINTING	176
ELECTRIC WIRING	45
HARDWARE	50
PLUMBING	325
HOT AIR HEATING	125
MISCELLANEOUS	7.62

TOTAL COST 4000 DOLLARS—

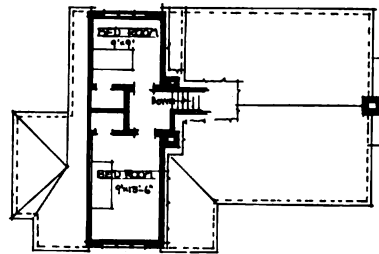
FIRST PRIZE DESIGN

Submitted by William Boyd, Jr., Pittsburgh, Pa.

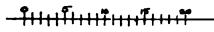




FIRST FLOOR



SECOND FLOOR



ENTRANCE DETAIL



FOUNDED BY

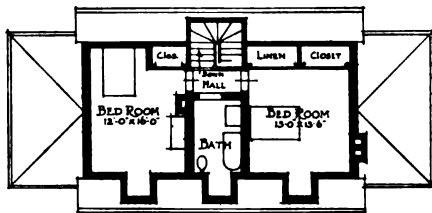


MAIN BUILDING ABOVE	
GRADE 25'-57" x 6'-18" x 2'-11" = 981.11	= 10791
BASEMENT BELOW	
GRADE UNDER	
KITCHEN WING 24'-26" x 6'-24" x 7'-5" = 4680	
EXCAVATED PART (981-624) x 2 = 714	
ATTIC FLOOR 29'-10" x 8" = 2320	
PORCHES (8'-12" x 7'-4") x 10 = 310	
	18815
	x 0.20
COST \$	3763.00

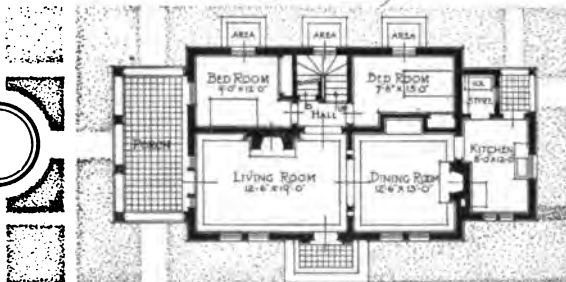
THE BRICK  
BUILDER  
COMPETITION  
FOR A HOUSE  
OF HOLLOW  
NATCO TILE

SECOND PRIZE DESIGN  
Submitted by C. A. Nilson, Boston, Mass.





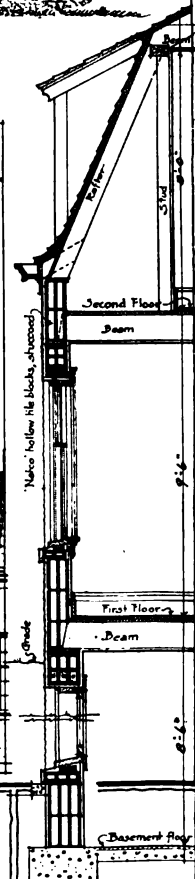
Second Floor Plan ~  
scale 1/4" = 1'-0" feet



First Floor Plan

#### ESTIMATE OF CUBAGE AND COST

MAIN PART ABOVE GRADE	23 1/2' x 34' x 18'	= 14382 CUFT.
KITCHEN WING ABOVE GRADE	9' x 19' x 10'	= 1710 CUFT.
PORCH AND FOUNDATION	9' x 19' x 15' ±	= 641 CUFT.
EXCAVATED PORTION OF CELLAR: FURNACE ROOM & LAUNDRY	3 1/4' x 10' x 7'	= 2380 CUFT.
REMAINING FOUNDATION OF MAIN PART	34' x 13 1/2' x 5' ±	= 374 CUFT.
KITCHEN FOUNDATION	19' x 9' x 5' ±	= 214 CUFT.
<b>TOTAL</b>		<b>= 19901 CUFT.</b>
<b>COST:</b>		<b>20</b>
<b>AT 20 CENTS PER CUFT.</b>		<b>= \$3980.20</b>

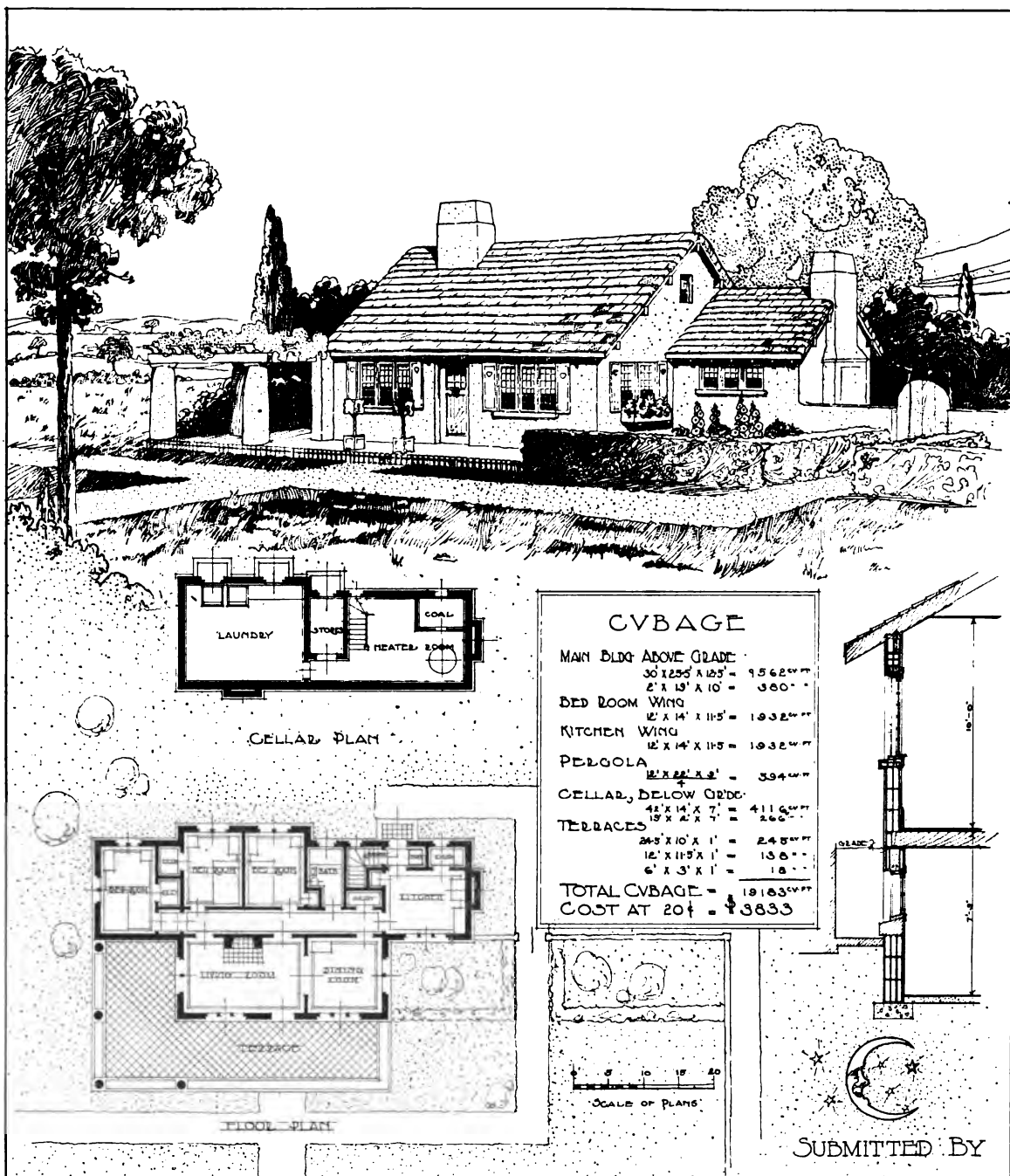


### BRICKBUILDER ~ COMPETITION FOR A SMALL HOUSE TO COST \$4000

THIRD PRIZE DESIGN

Submitted by Wilhelm Berg, New York, N. Y.



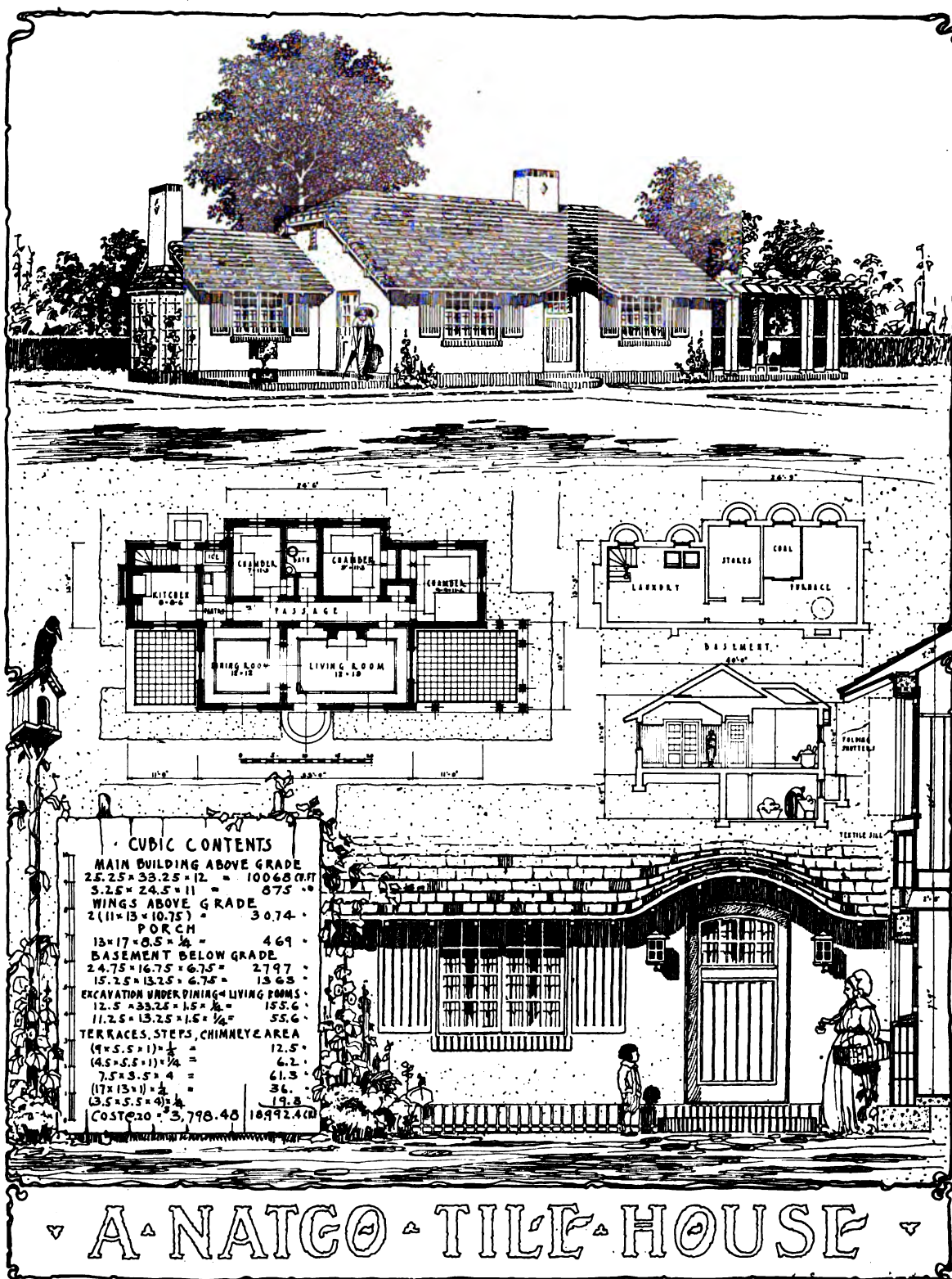


# BRICKBUILDER COMPETITION A HOLLOW TILE HOUSE

FOURTH PRIZE DESIGN

Submitted by William J. Mooney, Jamaica Plain, Mass.



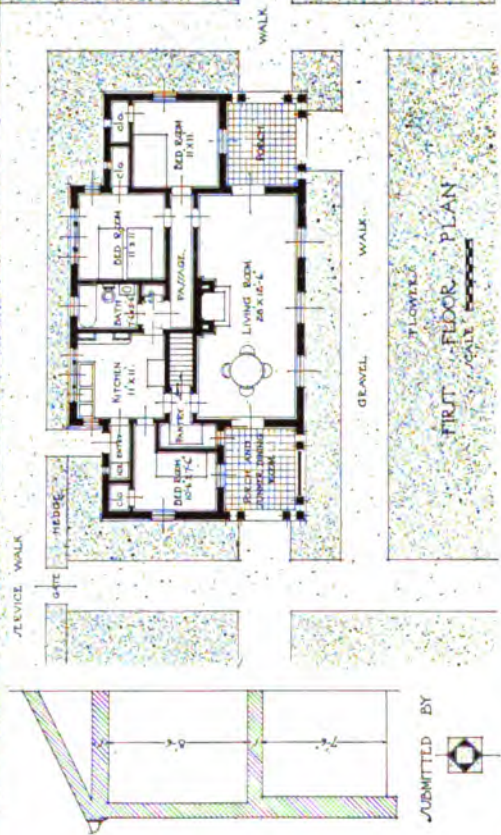
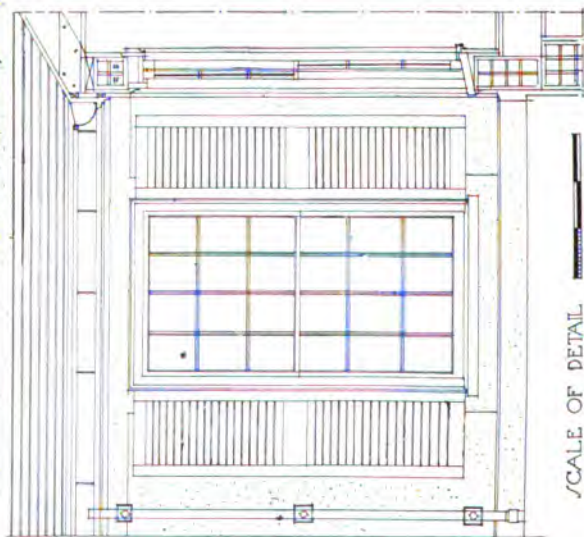
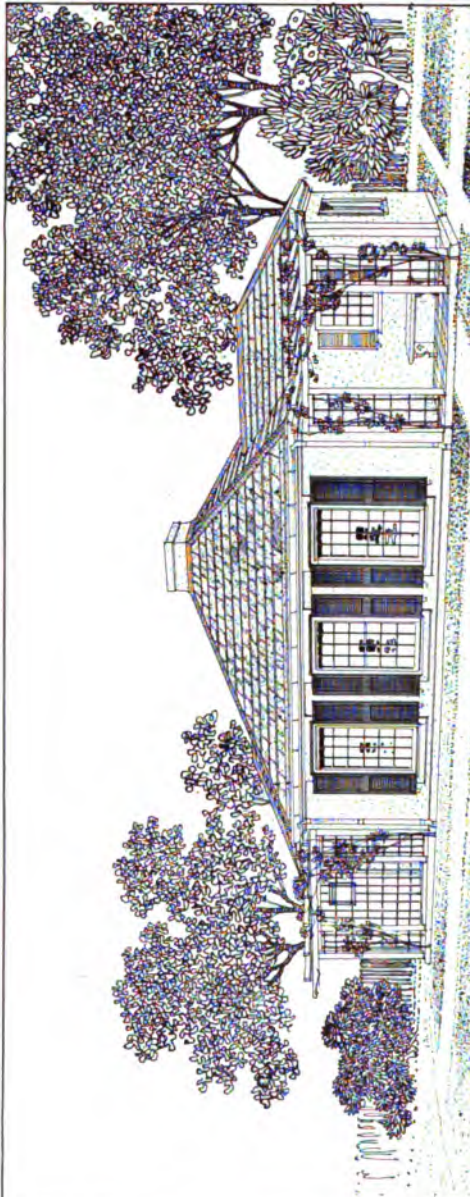


MENTION DESIGN  
Submitted by Jack Lehti, Washington, D. C.



NATCO HOLLOW TILE  
COMPETITION FOR A  
HOUSE OF THE BUNGALOW  
TYPE.  
CIVILIAN CONTENTS

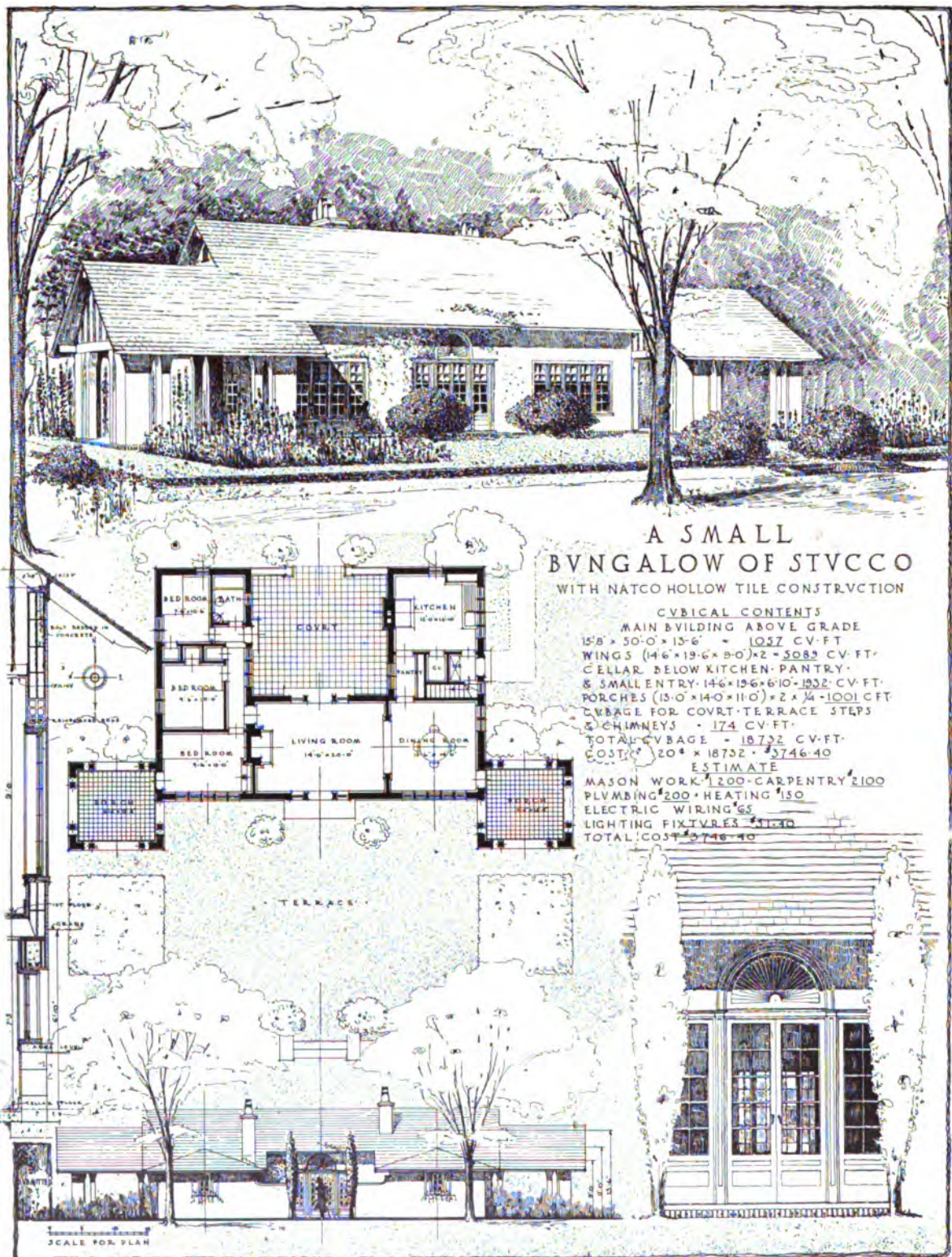
MAIN BUILDING	
WING 1	82.65 CVFT
WING 2	34.20 CVFT
WING 3	480 CVFT
CELLAR	33.75 CVFT
MAIN ROOF	
30' X 24' X 4' - AVERAGE	3480 CVFT
24' X 15' X 2' - AVERAGE	720 CVFT
TOTAL CVBAGE	13,740 CVFT
COST AT 20¢ CVFT	\$2,748.00





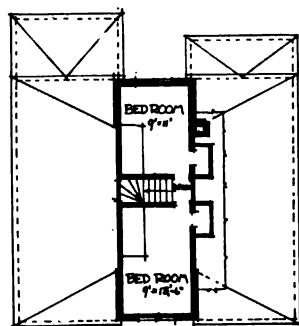




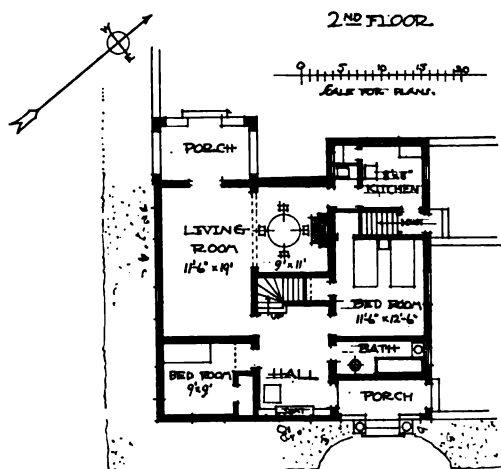


MENTION DESIGN  
Submitted by Herman Brookman, Brooklyn, N. Y.



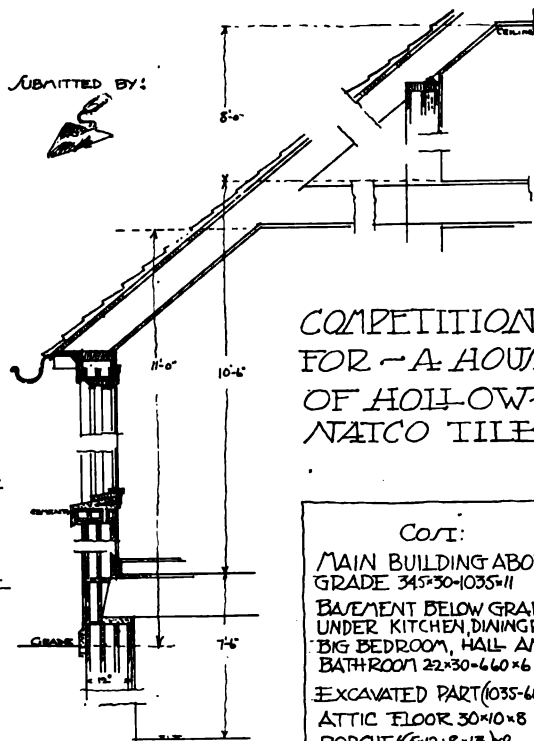


2ND FLOOR



1ST FLOOR

SUBMITTED BY:



COMPETITION  
FOR A HOUSE  
OF HOLLOW-  
NATCO TILE

COST:

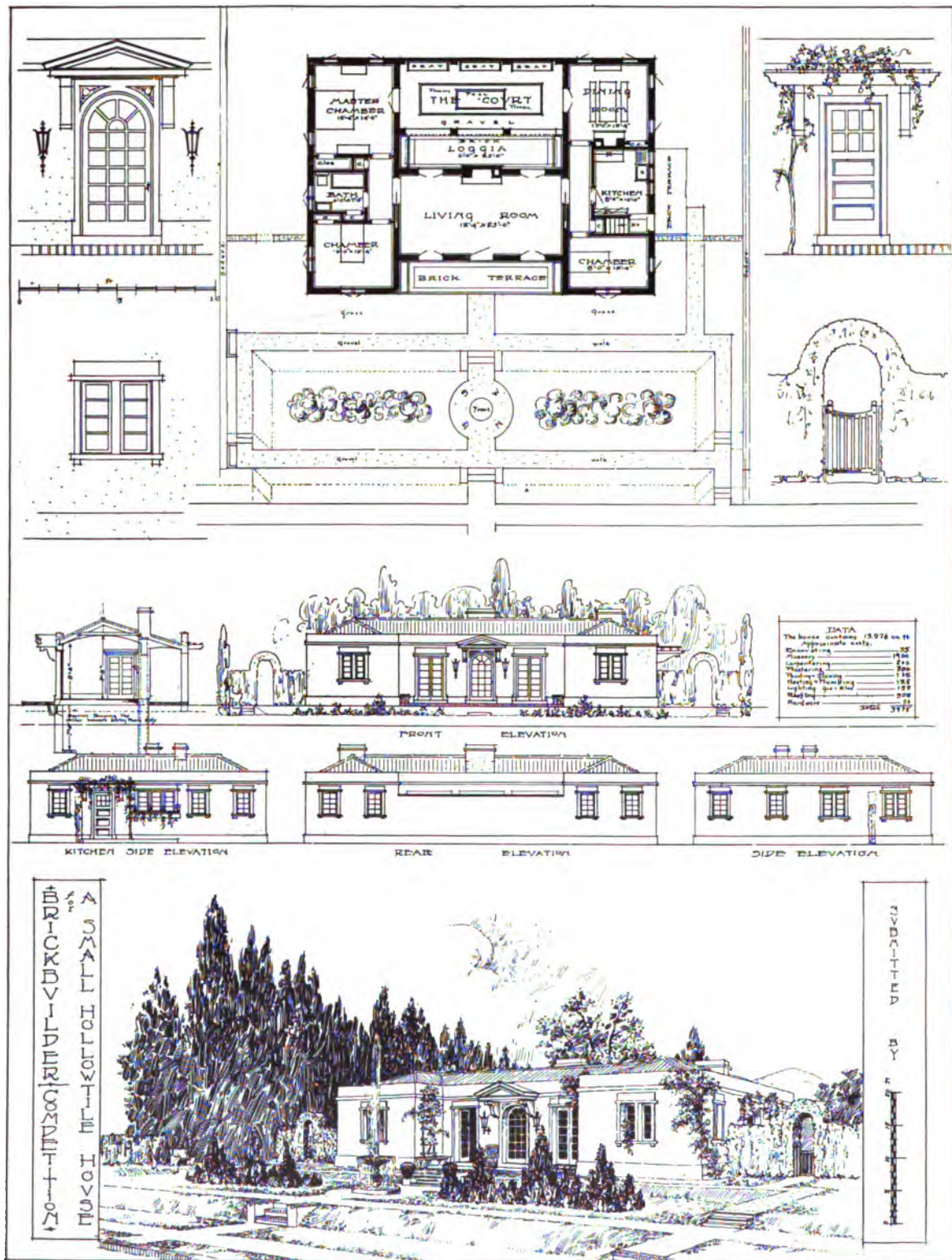
MAIN BUILDING ABOVE  
GRADE 345'30"-1035'11" = 11385.  
BASEMENT BELOW GRADE  
UNDER KITCHEN, DINING:  
BIG BEDROOM, HALL AND  
BATHROOM 22'x30'-660'x6 = 3960  
EXCAVATED PART (035-660)2 = 750  
ATTIC FLOOR 30'x10'x8 = 2400  
PORCH (5'x2'x8'x3'x9' = 369

= 18864  
x 0.20  
\$ 3772.80

MENTION DESIGN

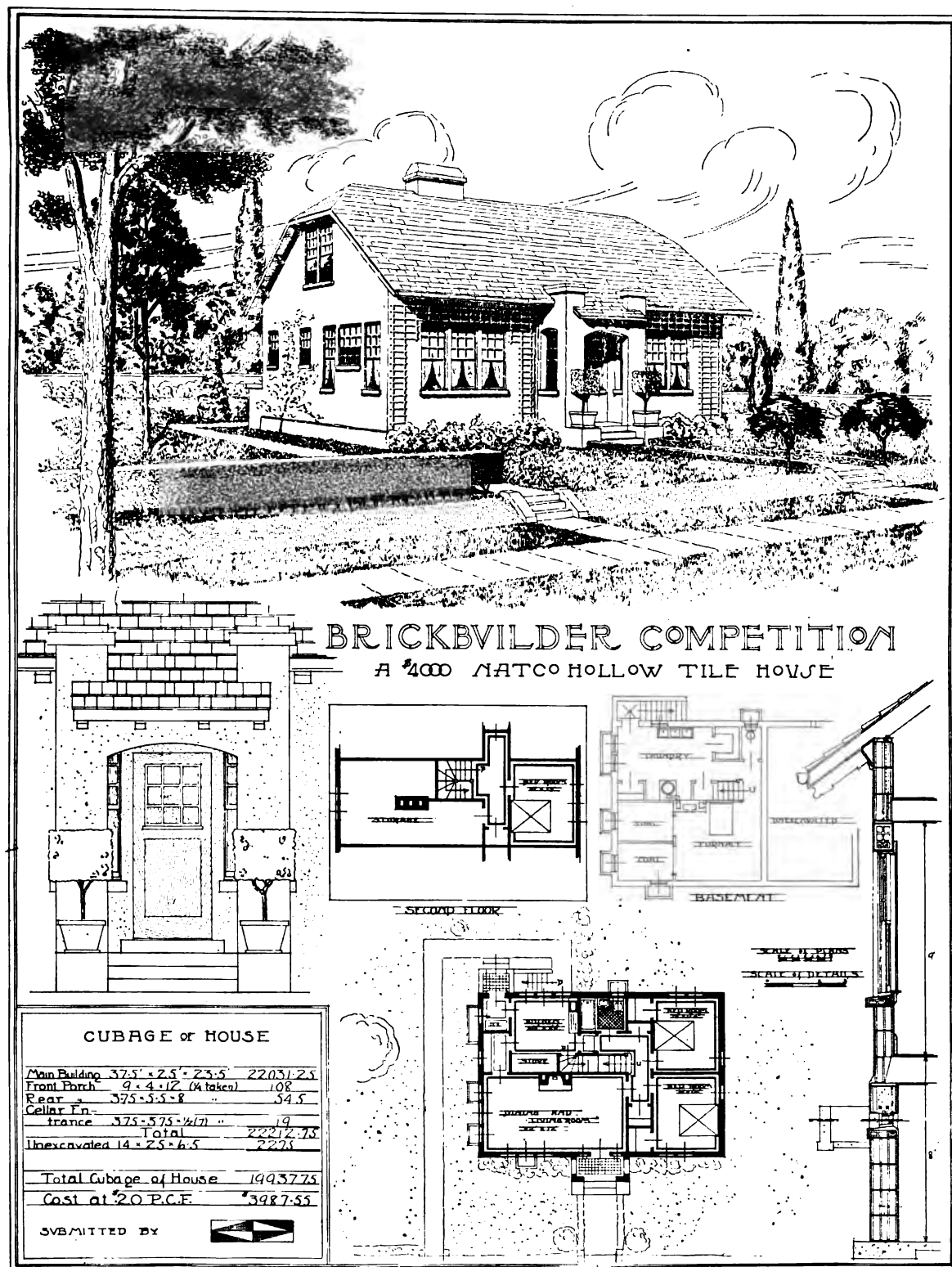
Submitted by C. A. Nilson, Boston, Mass.





MENTION DESIGN  
Submitted by Henry T. MacNeill, Philadelphia, Pa.

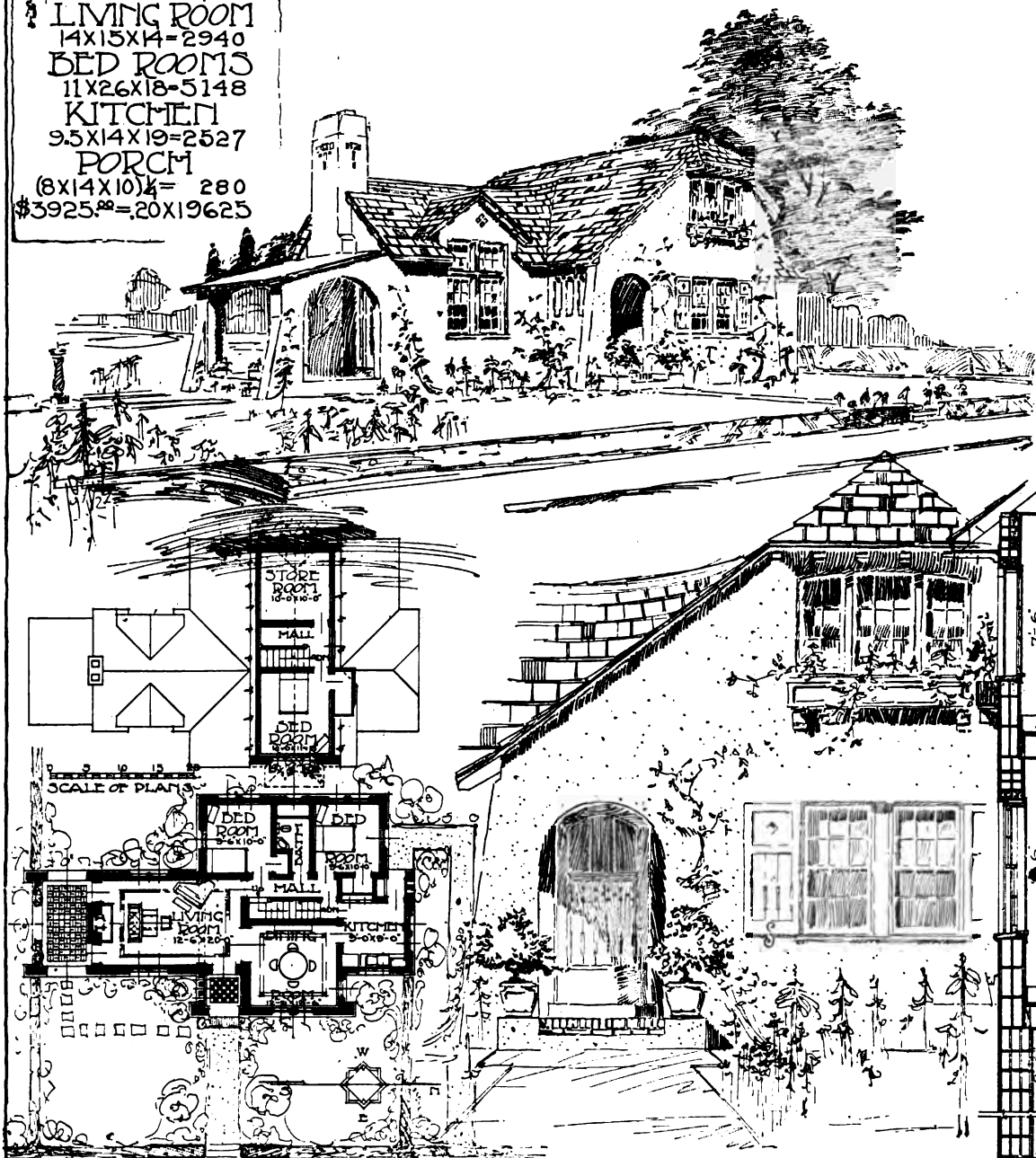




Design submitted by Walter L. Ward, Newark, N. J.



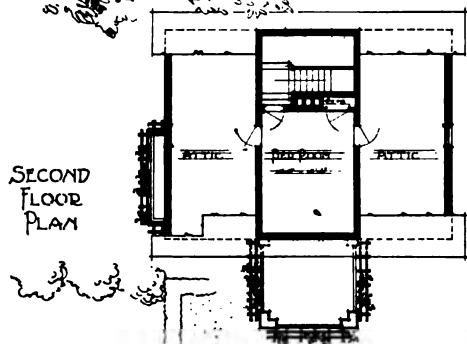
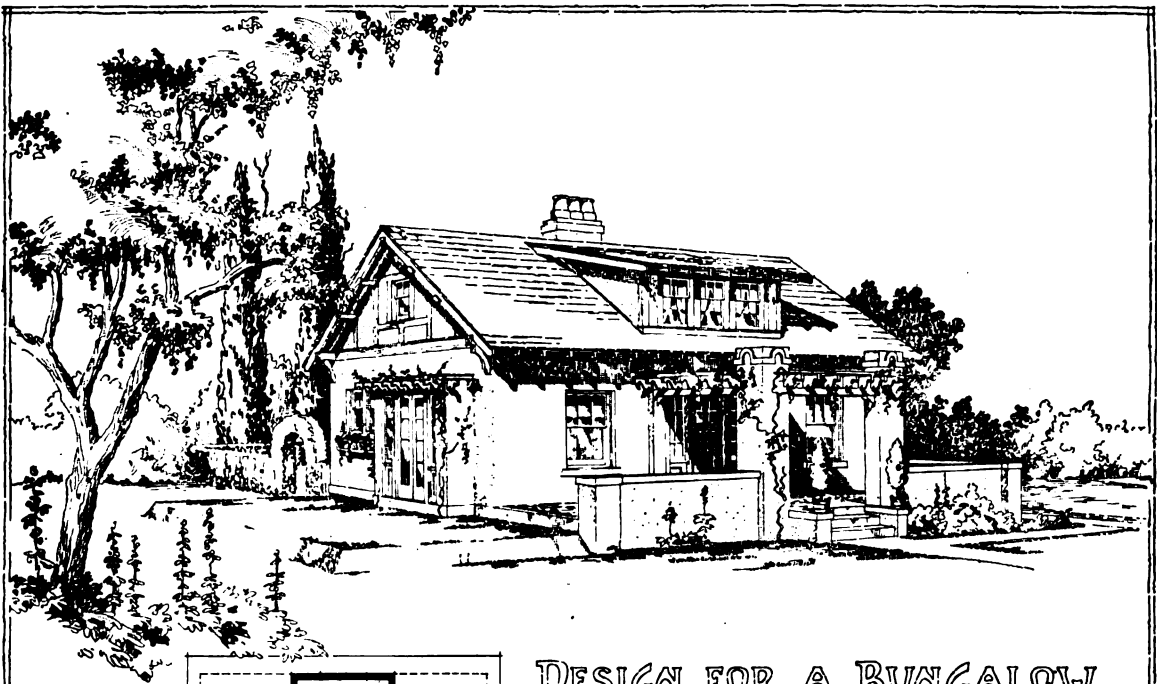
SUBMITTED BY  
 COST  
 DINING ROOM  
 19X20X23=8740  
 LIVING ROOM  
 14X15X14=2940  
 BED ROOMS  
 11X26X18=5148  
 KITCHEN  
 9.5X14X19=2527  
 PORCH  
 (8X14X10) 1/2 = 280  
 \$3925.00=20X19625



COMPETITION FOR A SMALL HOUSE  
 TO BE BUILT OF NATCO HOLLOW TILE  
 TO COST FOUR THOUSAND DOLLARS

Design Submitted by Lester E. Varian, Denver, Colo.





## DESIGN FOR A BUNGALOW

OF NATCO HOLLOW TILE FOR \$4000.00

ESTIMATED ON BASIS OF 20  
CENTS PER-CU-FOOT

MAIN BUILDING 20592-CU-FT

UNEXCAVATED 1196 " "

FRONT PORCH 330 " "

BAY WINDOW 55 " "

TOTAL 19781 " "

COST OF HOUSE \$3956.20

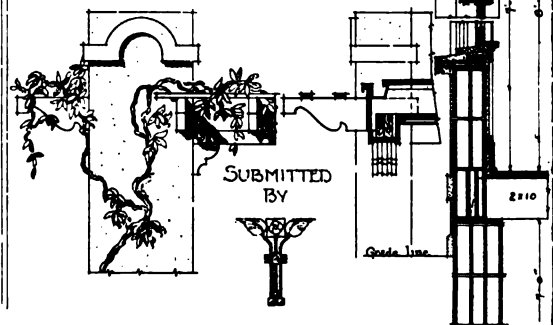
### DIMENSIONS

MAIN BUILDING 26'x36'x22'

UNEXCAVATED 26'x11'-6"x4'

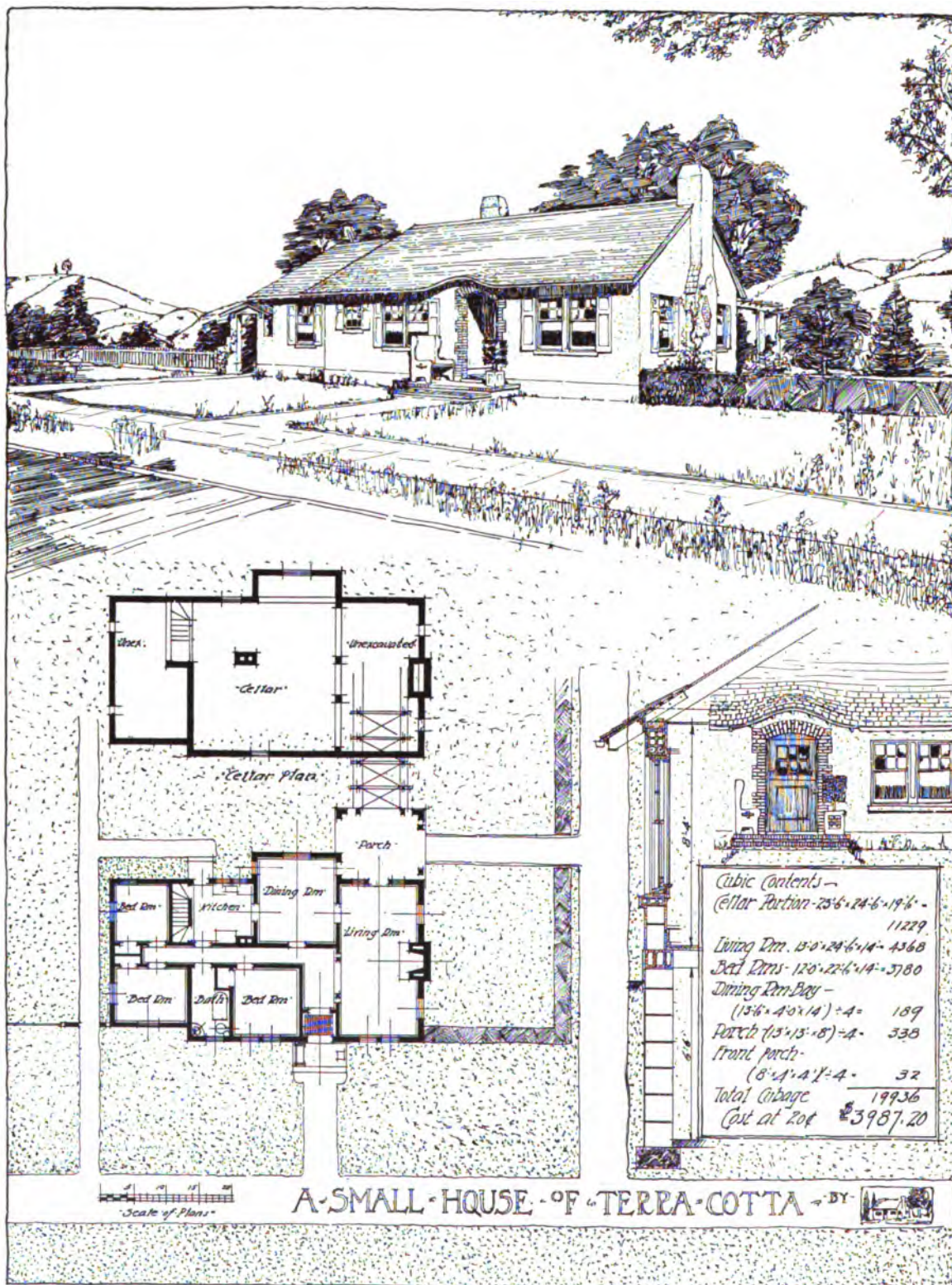
FRONT PORCH 11'x12'x10'

BAY WINDOW 12'x11'x10'



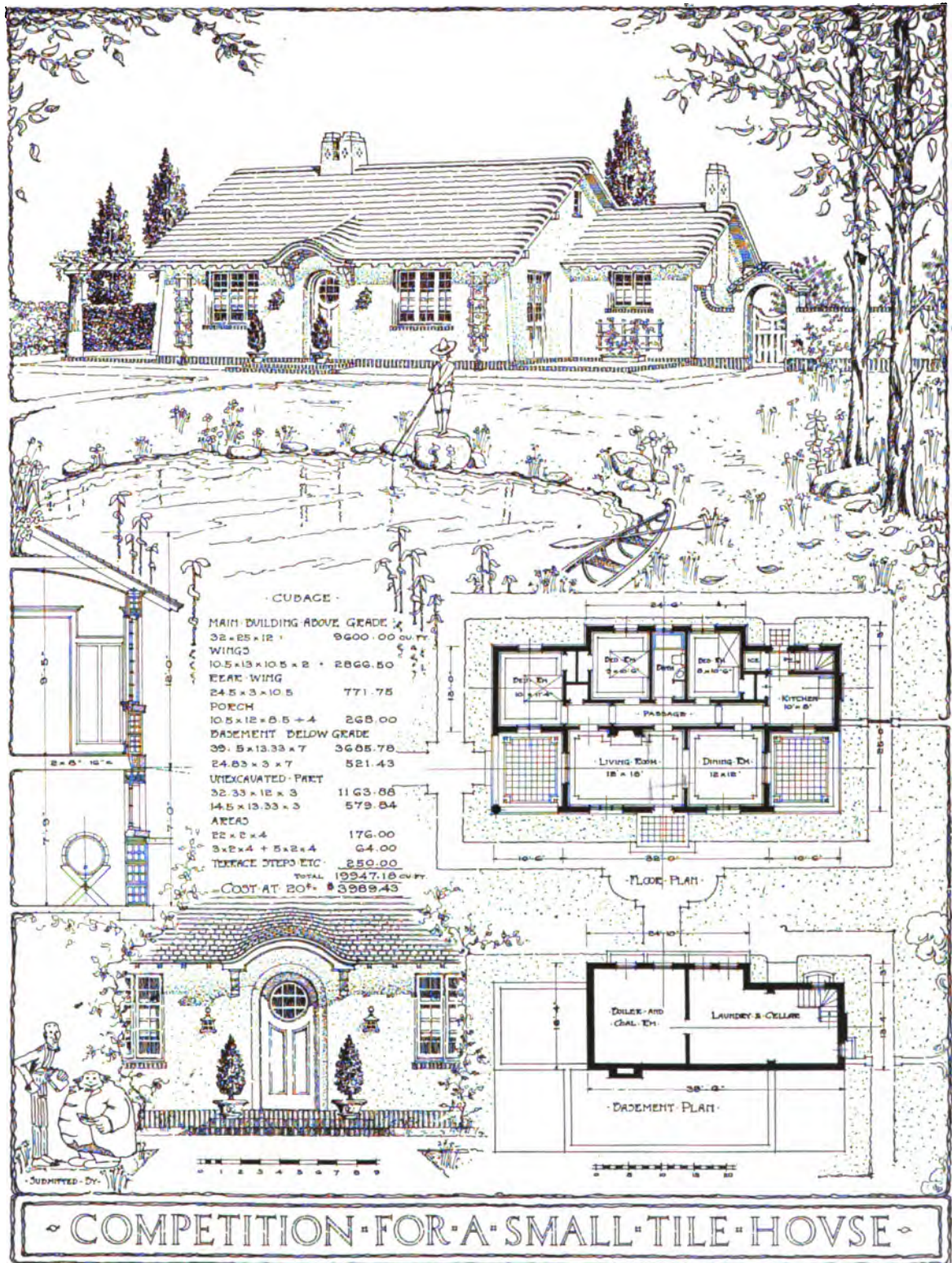
Design Submitted by Homer D. Brown, Akron, Ohio.





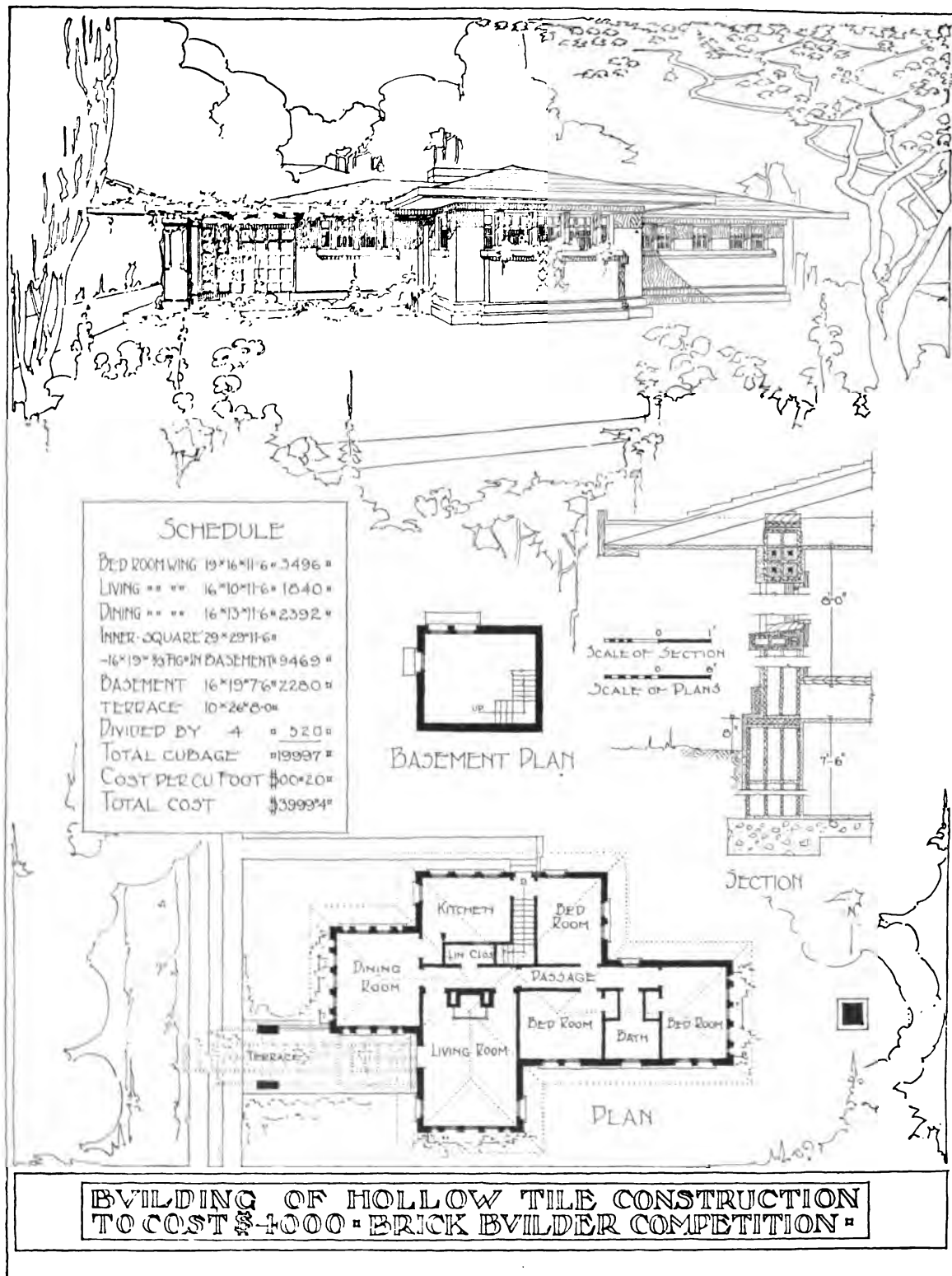
Design Submitted by Robert Polhemus, Poughkeepsie, N. Y.





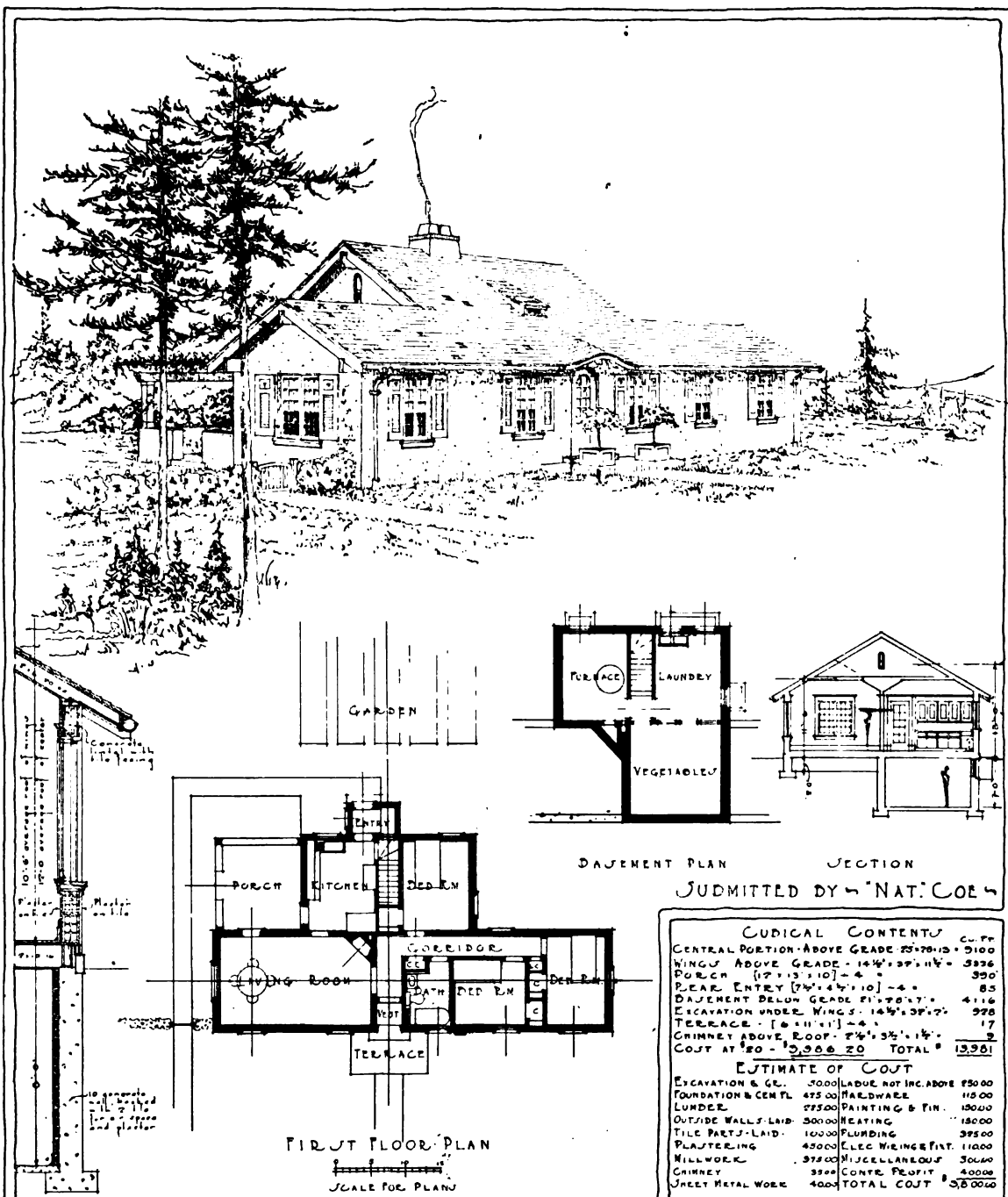
Design Submitted by Frank Haushka, Cleveland, Ohio.





Design Submitted by the Lloyd-Wright Bros., San Diego, Cal.

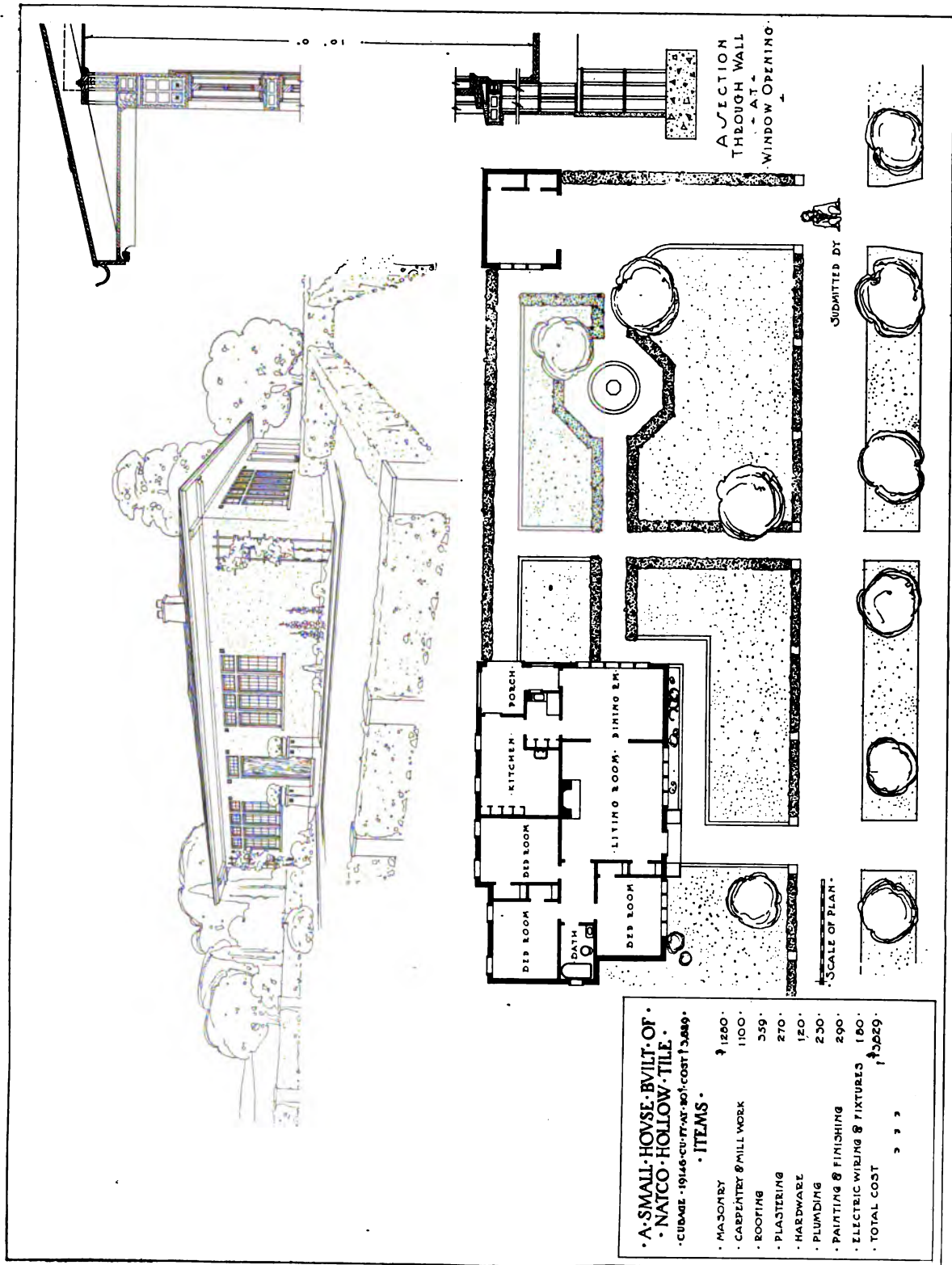




# COMPETITION FOR A SMALL HOUSE TO BE BUILT OF NATCO HOLLOW TILE

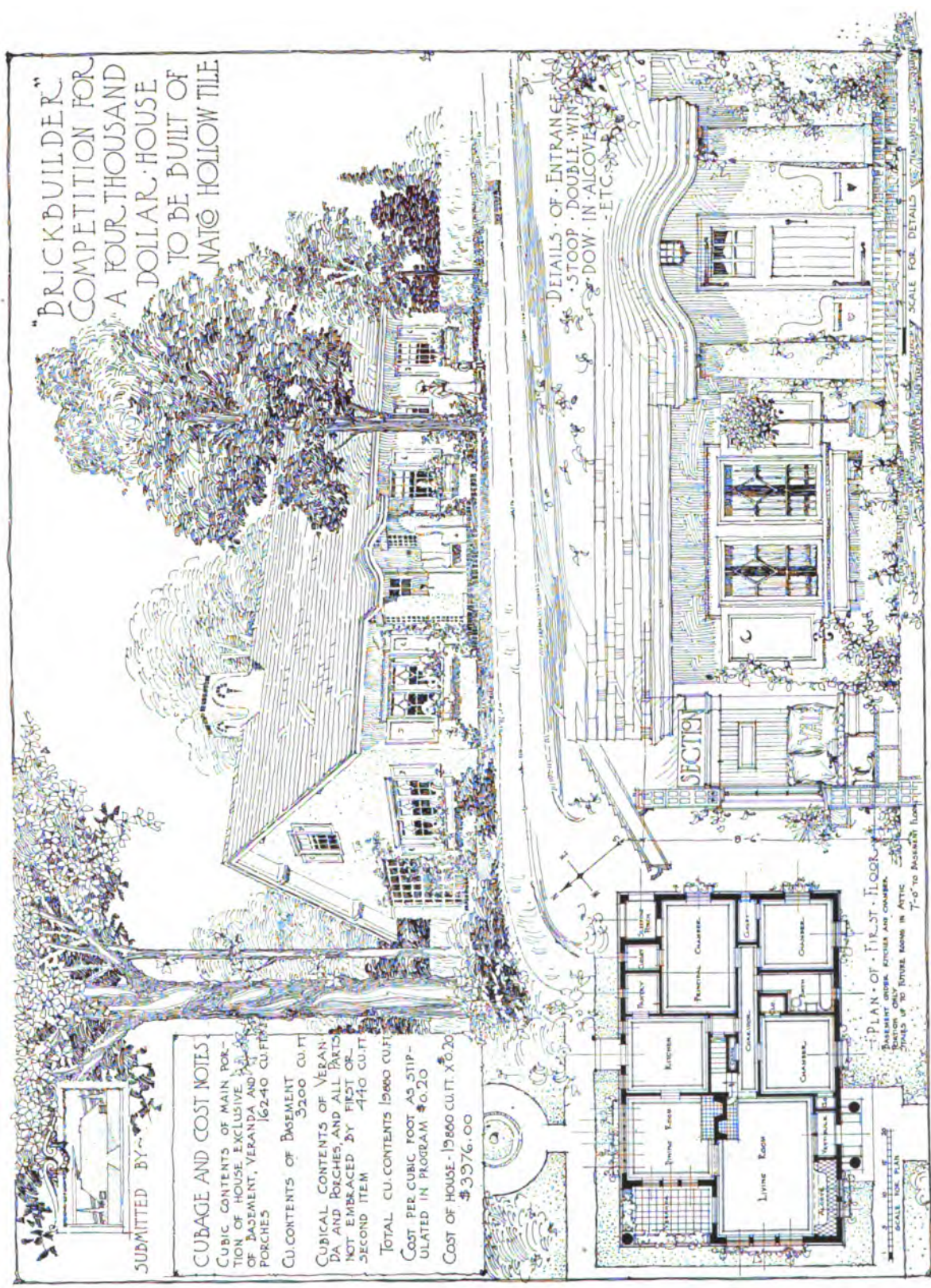
Design Submitted by Frederick S. Stott, St. Paul, Minn.





Design Submitted by Ralph Brodie, Porto Rico, W. I.





"BRICKBUILDER"  
 COMPETITION FOR  
 A FOUR-THOUSAND  
 DOLLAR HOUSE  
 TO BE BUILT OF  
 NAT'L HOLLOW TILE

SUBMITTED BY:-  
 CUBAGE AND COST NOTES  
 CUBIC CONTENTS OF MAIN POR-  
 TION OF HOUSE, EXCLUSIVE  
 OF BASEMENT, VERANDA AND  
 PORCHES 16240 CU.FT.  
 CU. CONTENTS OF BASEMENT  
 3200 CU.FT.  
 CUBICAL CONTENTS OF VERAN-  
 DA AND PORCHES, AND ALL PARTS  
 NOT EMBRACED BY FIRST OR  
 SECOND ITEM 440 CU.FT.  
 TOTAL CU. CONTENTS 19880 CU.FT.  
 COST PER CUBIC FOOT AS STIP-  
 ULATED IN PROGRAM \$0.20  
 COST OF HOUSE - 19880 CU.FT. X \$0.20  
 \$3976.00

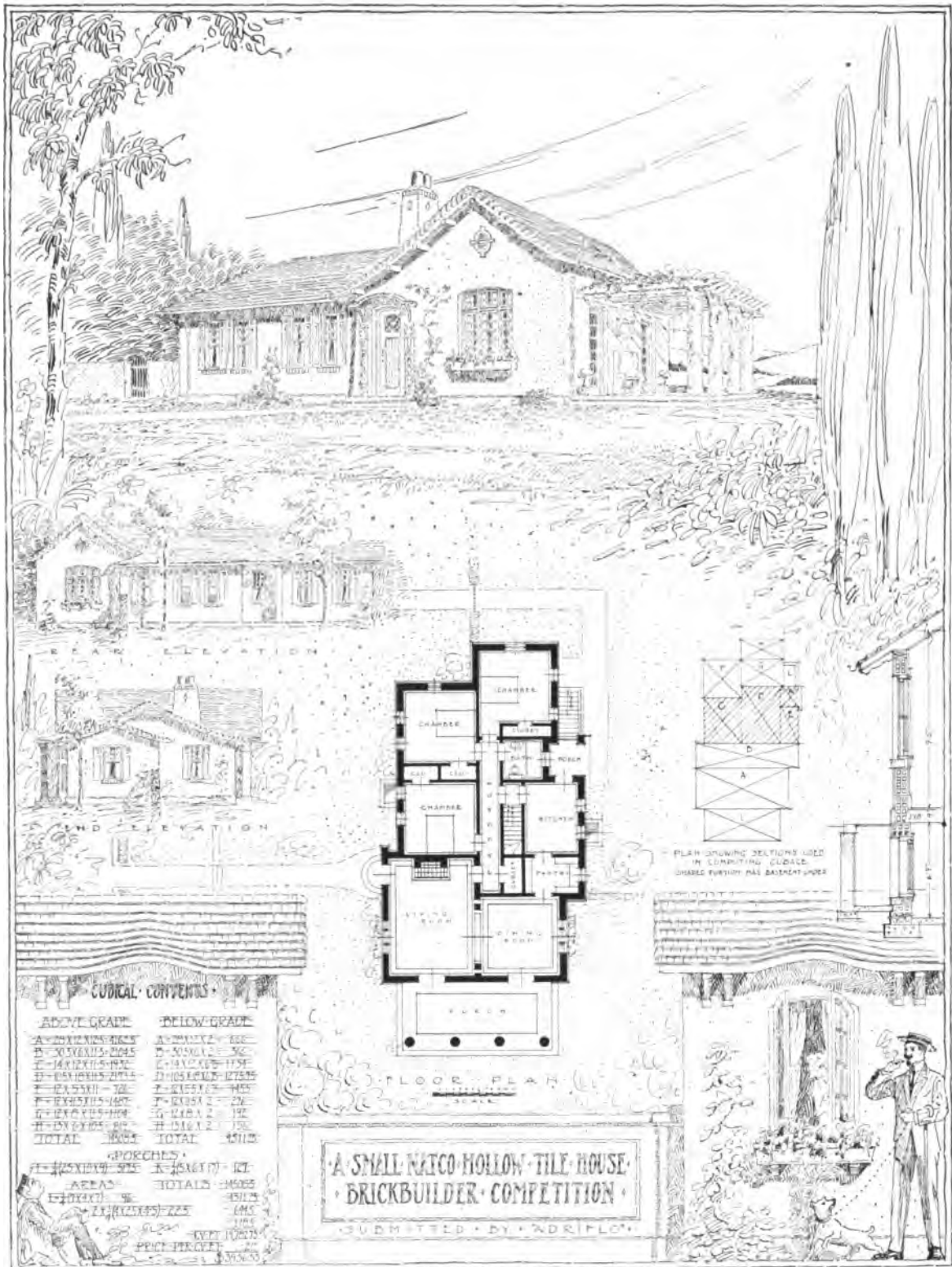
DETAILS OF ENTRANCE  
 STOOP - DOUBLE-WIND-  
 DOW - IN - ALCOVE -  
 ETC.

PLAN OF FIRST FLOOR  
 BREAKFAST ROOM, KITCHEN AND CLOSET  
 SECTION ONLY  
 DIMENSIONS UP TO FIVE FEET IN ANY  
 DIRECTION

SCALE FOR DETAILS 1/4" = 1'-0"

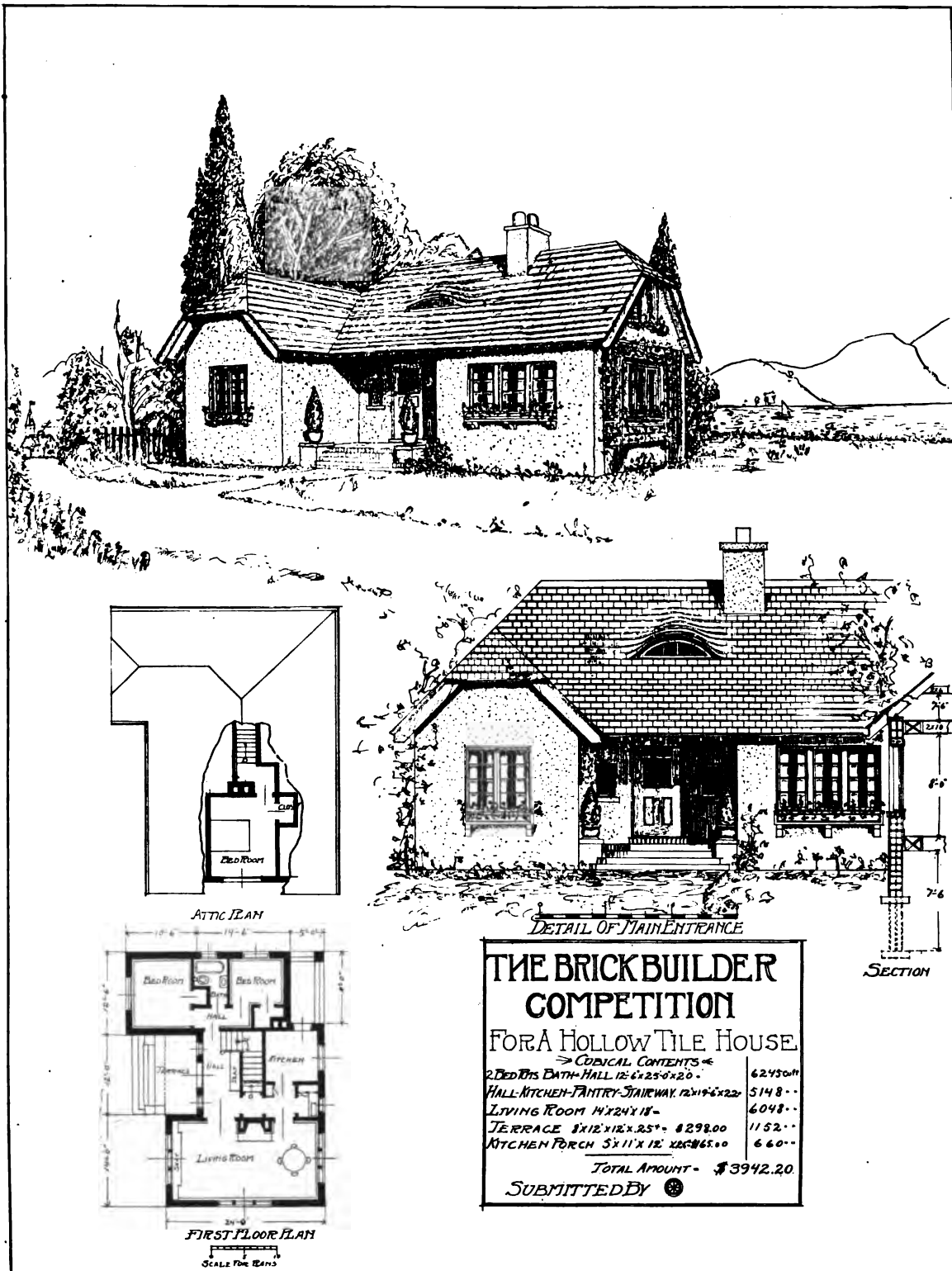
Design Submitted by Richard M. Powers and George F. Blount, Boston, Mass.





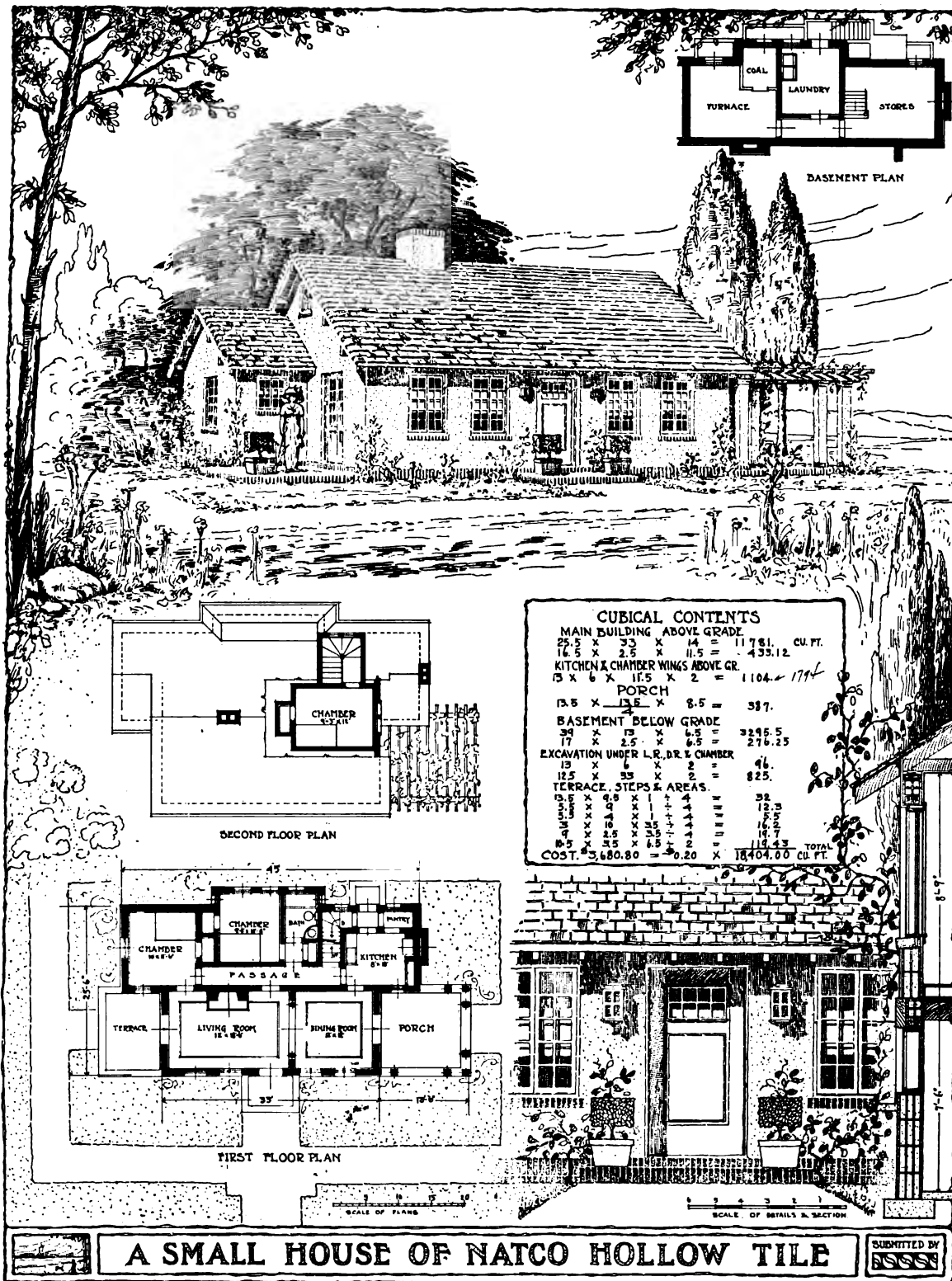
Design Submitted by Adrian Clark Finlayson, Washington, D. C.





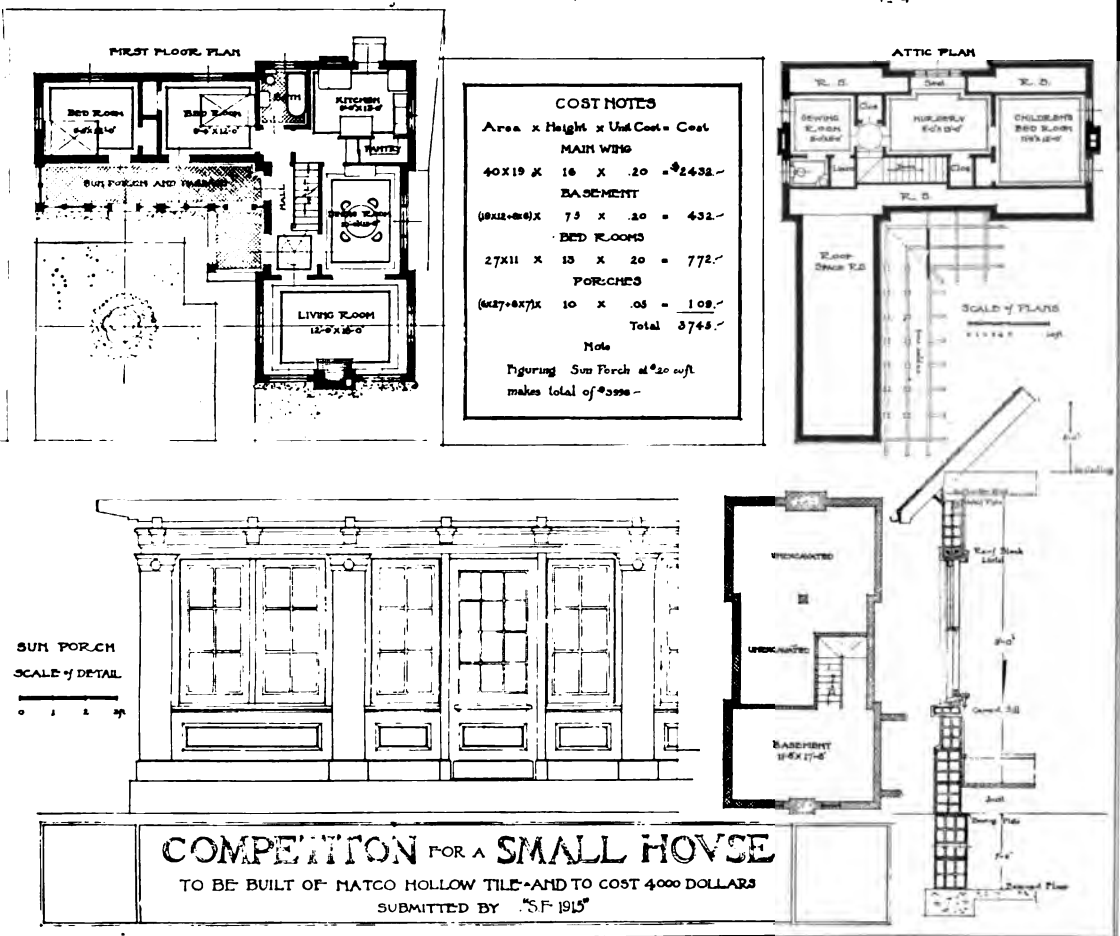
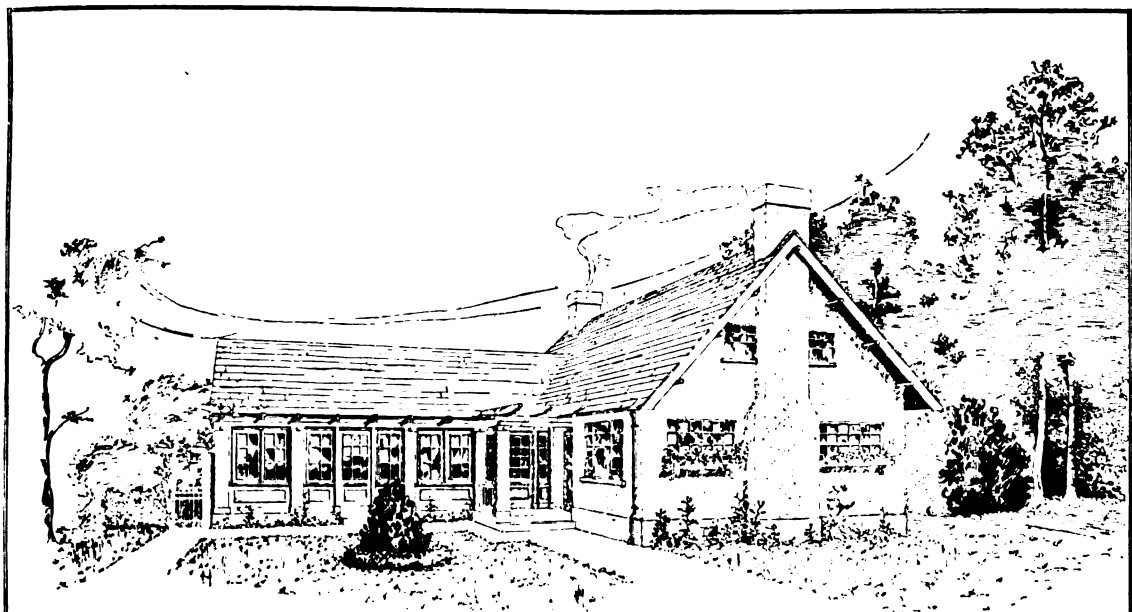
Design Submitted by Joseph R. Hauser, Denver, Colo.





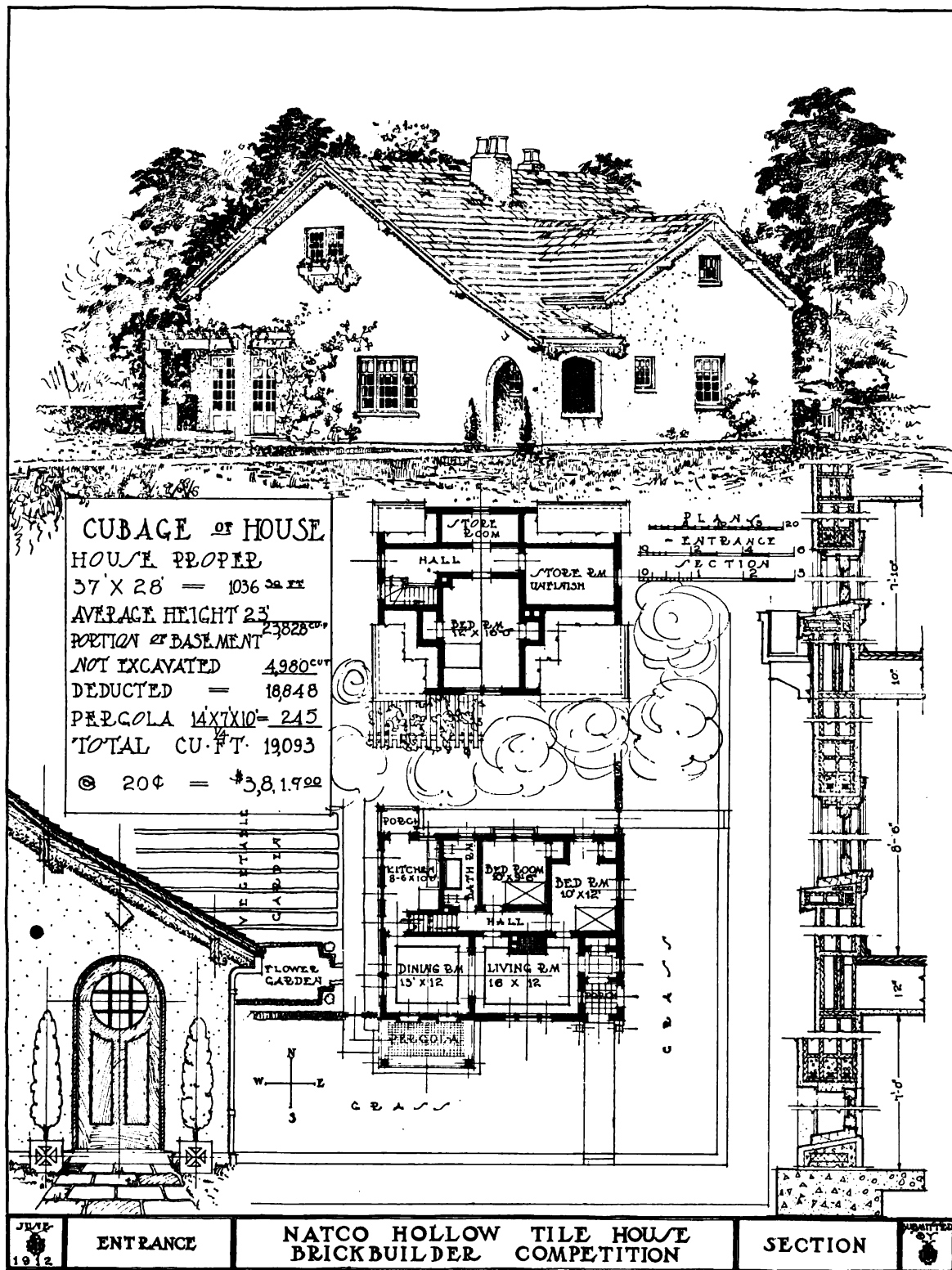
Design Submitted by Frederick Scholer, Chicago, Ill.





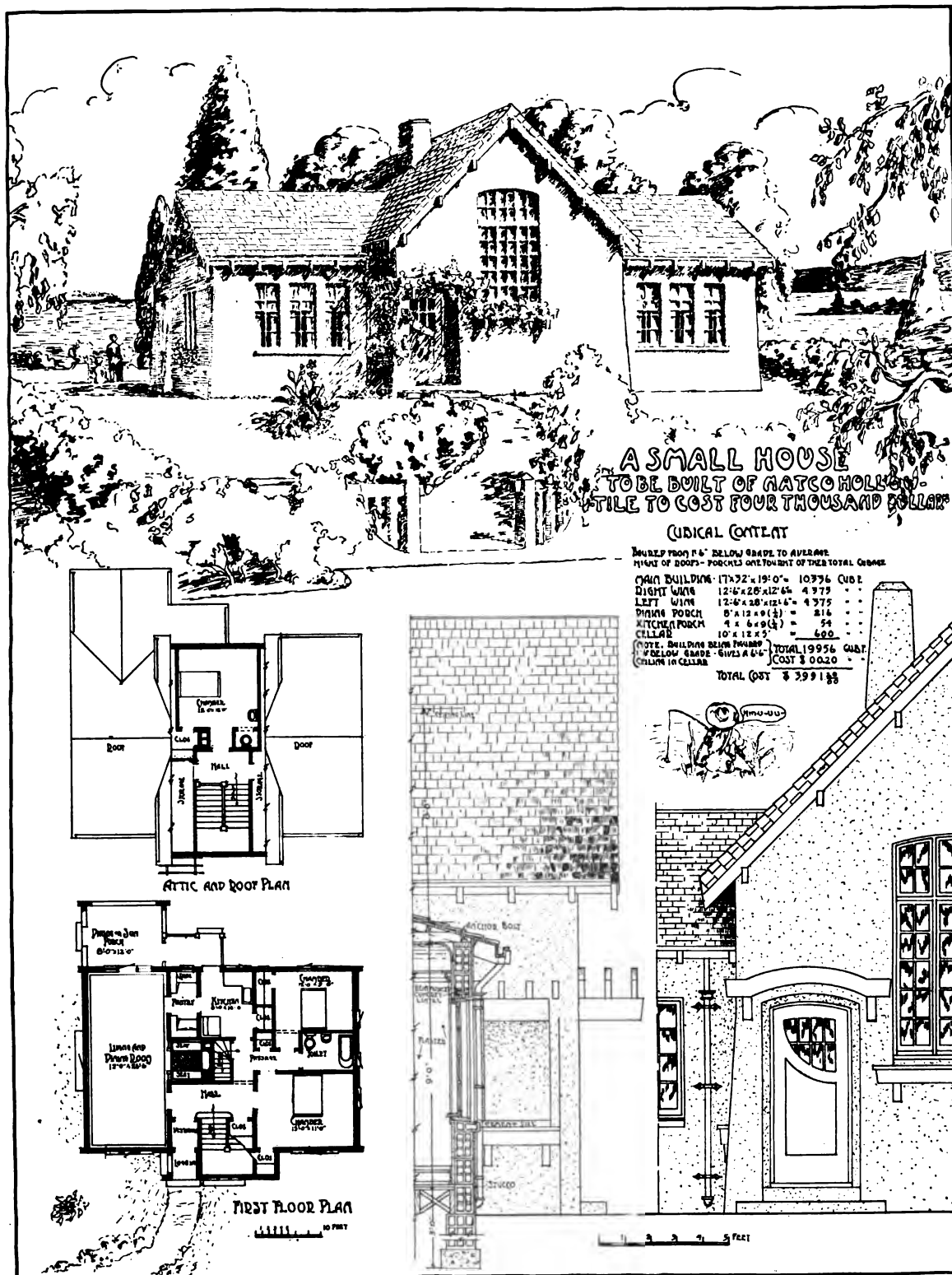
Design Submitted by Ralph C. Sisson, Oakland, Cal.





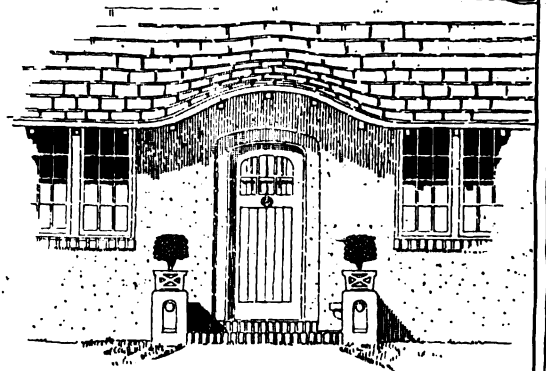
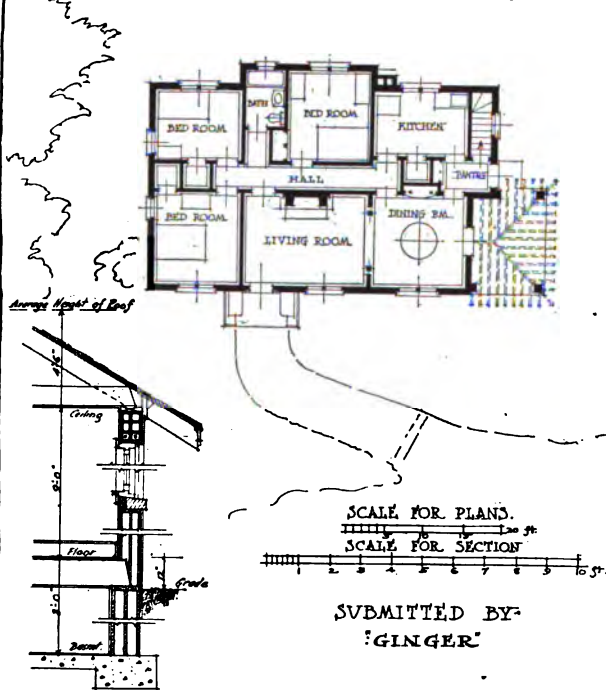
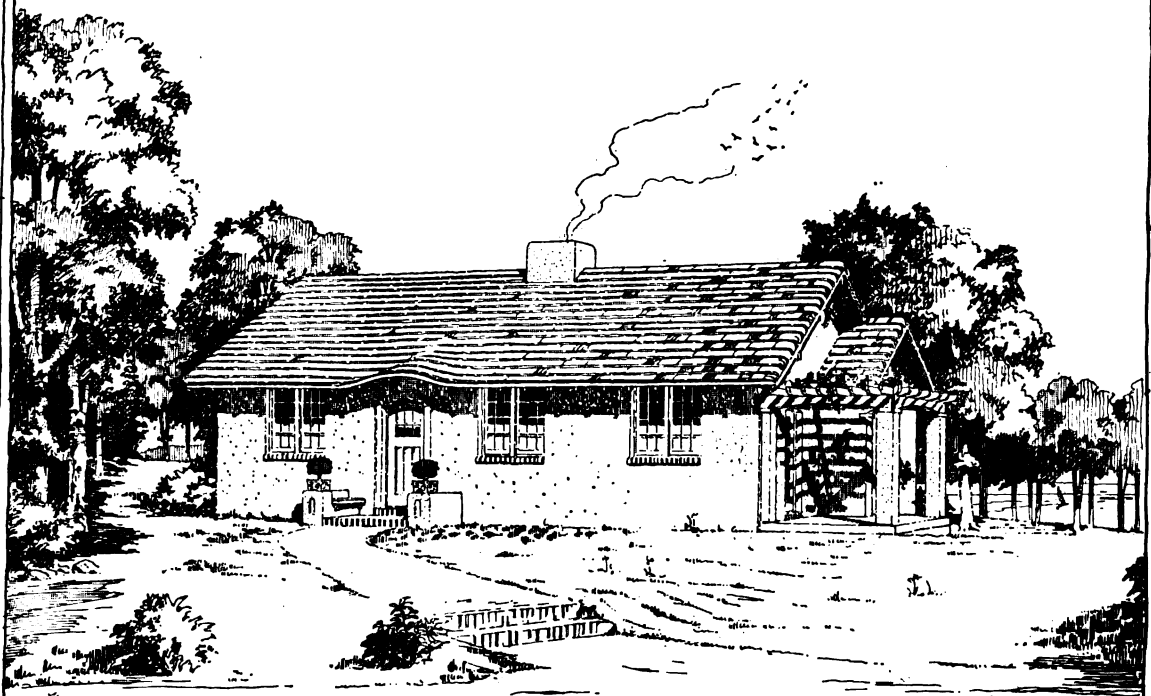
Design Submitted by L. L. Dougan, Portland, Ore.





Design Submitted by Olof Daniels, Duluth, Minn.



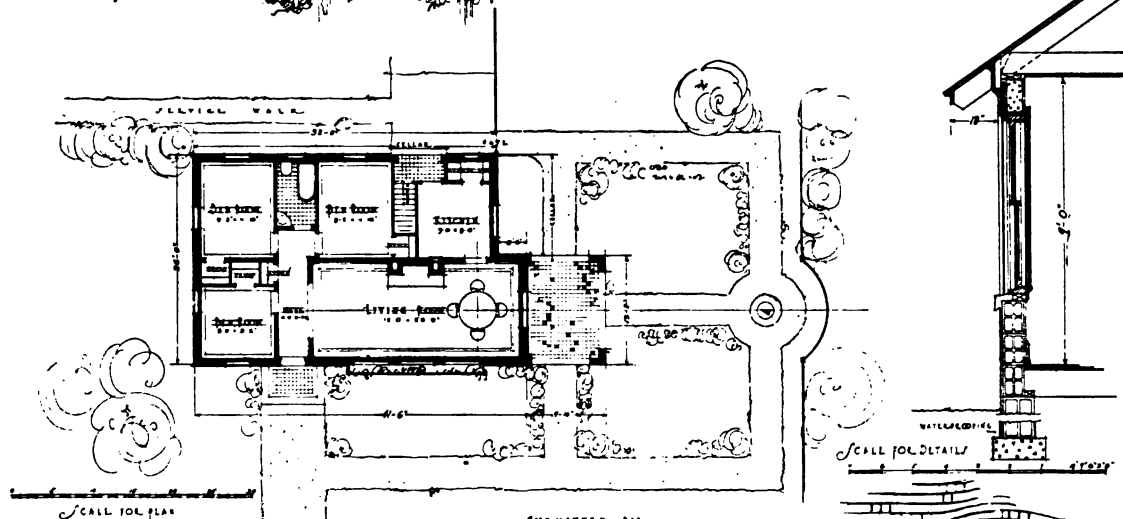
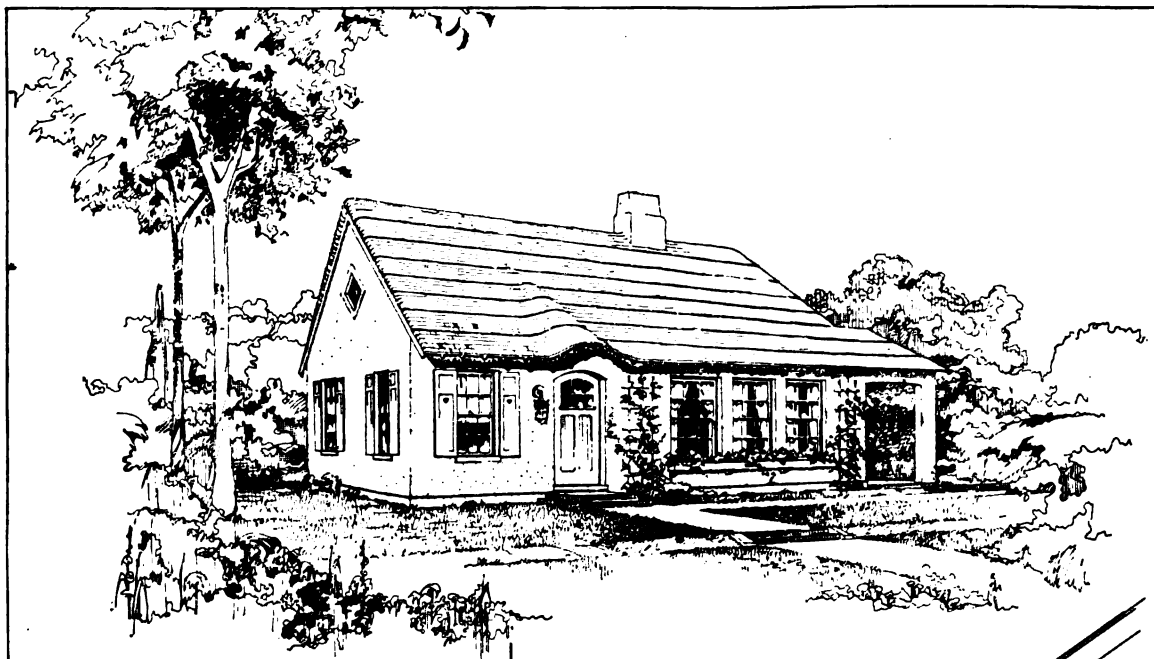


DATA		
MAIN PART	41'x26'x14'6"	= 15437 CU. FT.
REAR DAY	17'x2'x14'6"	= 628 "
SIDE DAY	13'x3'x12'6"	= 323 "
PORCH	9'x13'x9'-4"	= 263 "
CELLAR	30'x14'x7'	= 2940 "
TOTAL CUBAGE		= 19813 CU. FT.
COST AT 20¢ CU. FT.		= \$3962.60
EXCAVATION		\$ 90.00
CONCRETE & GRANITOID		100.00
TILE		400.00
PLASTER & STUCCO		200.00
CARPENTRY & MILLWORK		1600.00
SHINGLE ROOF		180.00
PLUMBING		300.00
GLAZING & PAINTING		200.00
HARDWARE		105.00
WIRING & FIXTURES		150.00
FURNACE HEAT		225.00
TOTAL WITH COMMISSION OF 10%		\$3905.00

## BRICK-BUILDER COMPETITION FOR A FOUR THOUSAND DOLLAR TILE HOUSE

Design Submitted by E. L. Pleitsch, St. Louis, Mo.



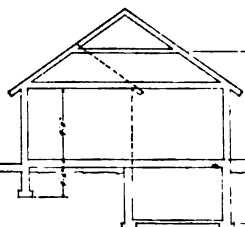


CUBIC CONTENTS		
CELLAR	8 - 15 - 28	2912 CU. FT.
BATH PART OF HOUSE	14 - 38 - 26	14832
LIVING RM. EXT.	38 - 15 1/2 - 11 1/2	552
PORCH	1/4 OF 34 - 10 - 11 1/2	594
UNLCAVATED PART		1019
TOTAL (6' 8" for 1st fl.)	\$3942.00	19709 CU. FT.

ESTIMATE			
BOND, PLANT & ETC	65	CEMENT FLOOR	63
EXCAVATING	115	TILE FLOOR	116
CONCRETE FOOTING	85	PLUMBING	180
WATERPROOFING	75	HEATING	300
HOLLOW TILE WALLS	765	SHINGLE ROOF	146
MILL WORK & CARPENTRY	1190	PAINTING	221
EXTERIOR STUCCO	176	HARDWARE	75
PLASTERING	240	EL. WIRING & FIXTURES	130
TOTAL	\$3942.00		

SUBMITTED BY  
"THE OFFICE BOY"



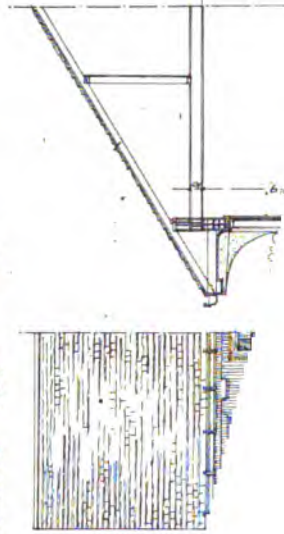
## A 4000 DOLLAR NATCO HOLLOW TILE HOUSE

Design Submitted by Joseph A. Parks, Washington, D. C.

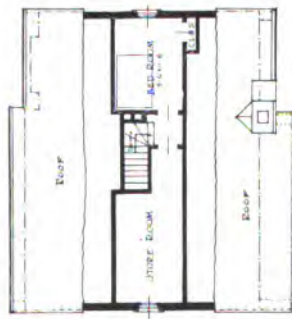




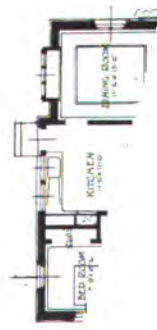
-PERSPECTIVE VIEW-



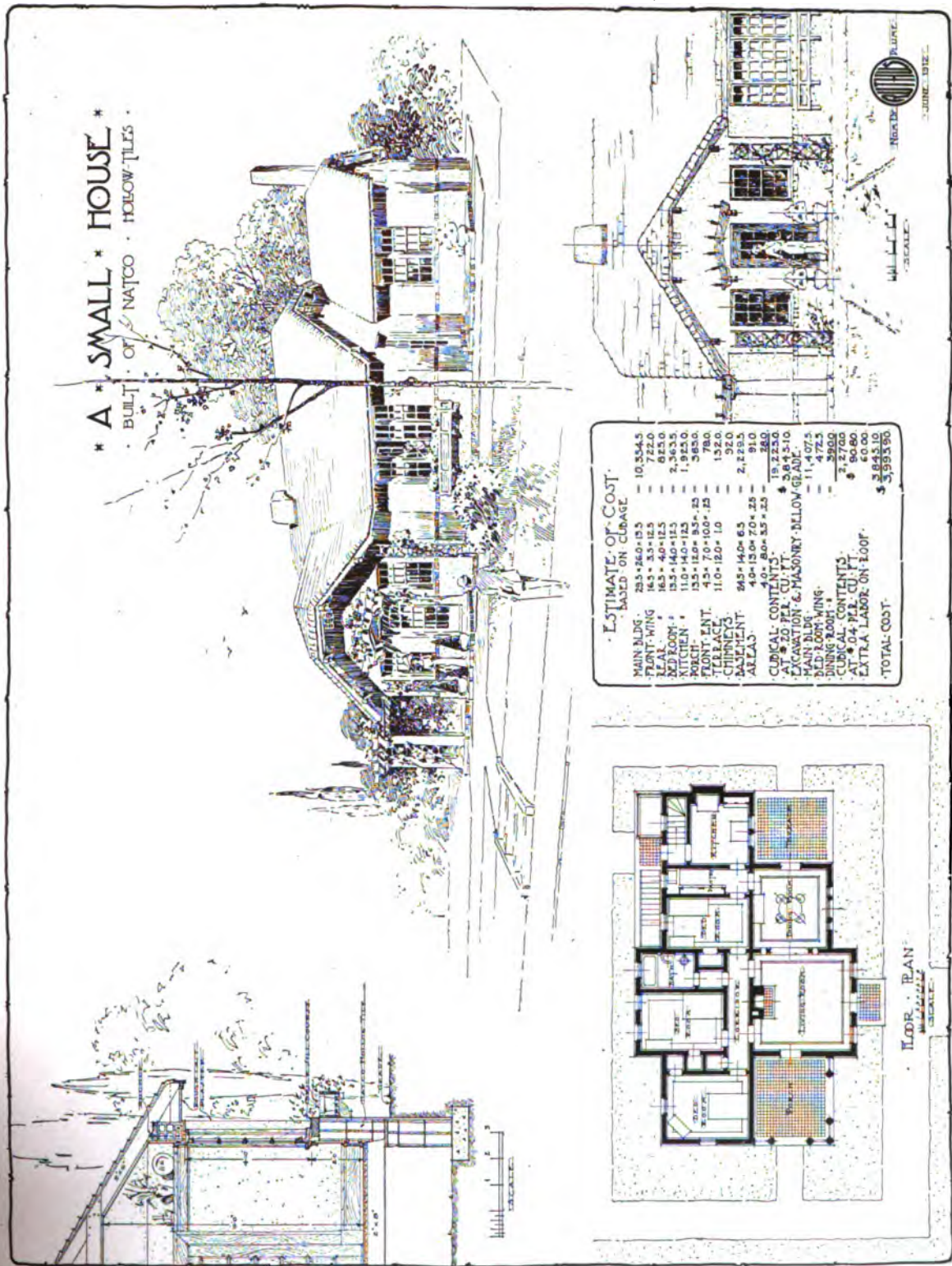
NOTES -  
 HOUSE 15.37 FEET BY  
 28 FEET WHICH EQUALS  
 1036 SQUARE FEET TIMES  
 100 WT EQUALS 16576  
 113 46



-SECOND FLOOR & ROOF PLAN-

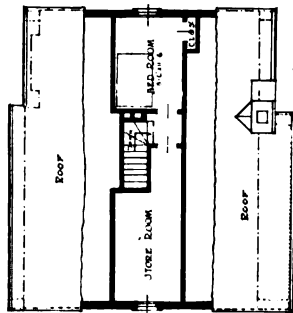






Design Submitted by V. H. Nellenbogen, Calgary, Alta., Can.

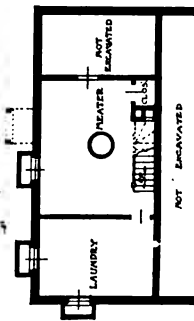




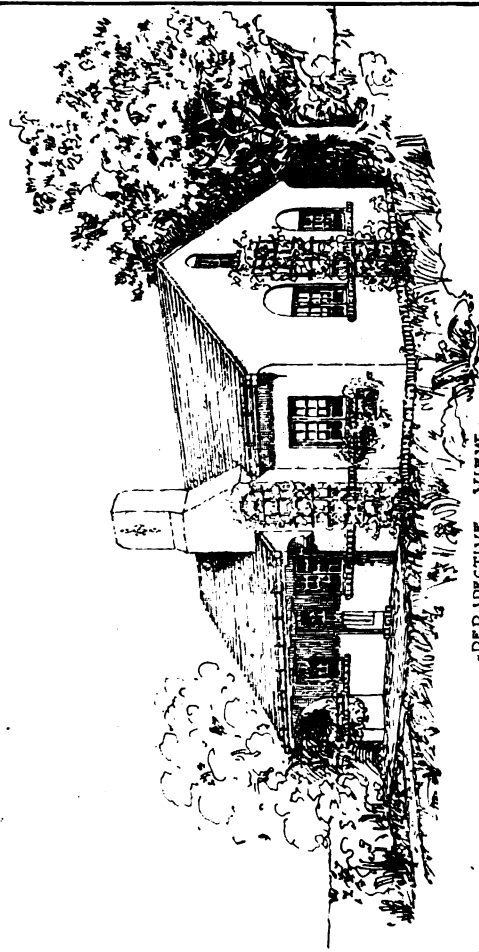
-SECOND FLOOR & ROOF PLAN-



-FIRST FLOOR PLAN-



-BASEMENT PLAN-



-PERSPECTIVE VIEW-

-NOTES-  
HOUSE 13.37 FEET BY  
28 FEET WHICH EQUALS  
1036 SQUARE FEET TIMES  
16 FEET EQUALS 16,576  
CUBIC FEET PLUS 46  
CUBIC FEET FOR FRONT  
PORCH, 105 CUBIC FEET FOR  
DINING ROOM BAY, 3273  
CUBIC FEET FOR BASE-  
MENT EQUALS 20000  
CUBIC FEET TIMES 20  
CENTS EQUALS \$4000.



-ENTRANCE DETAIL-

-SECTION-

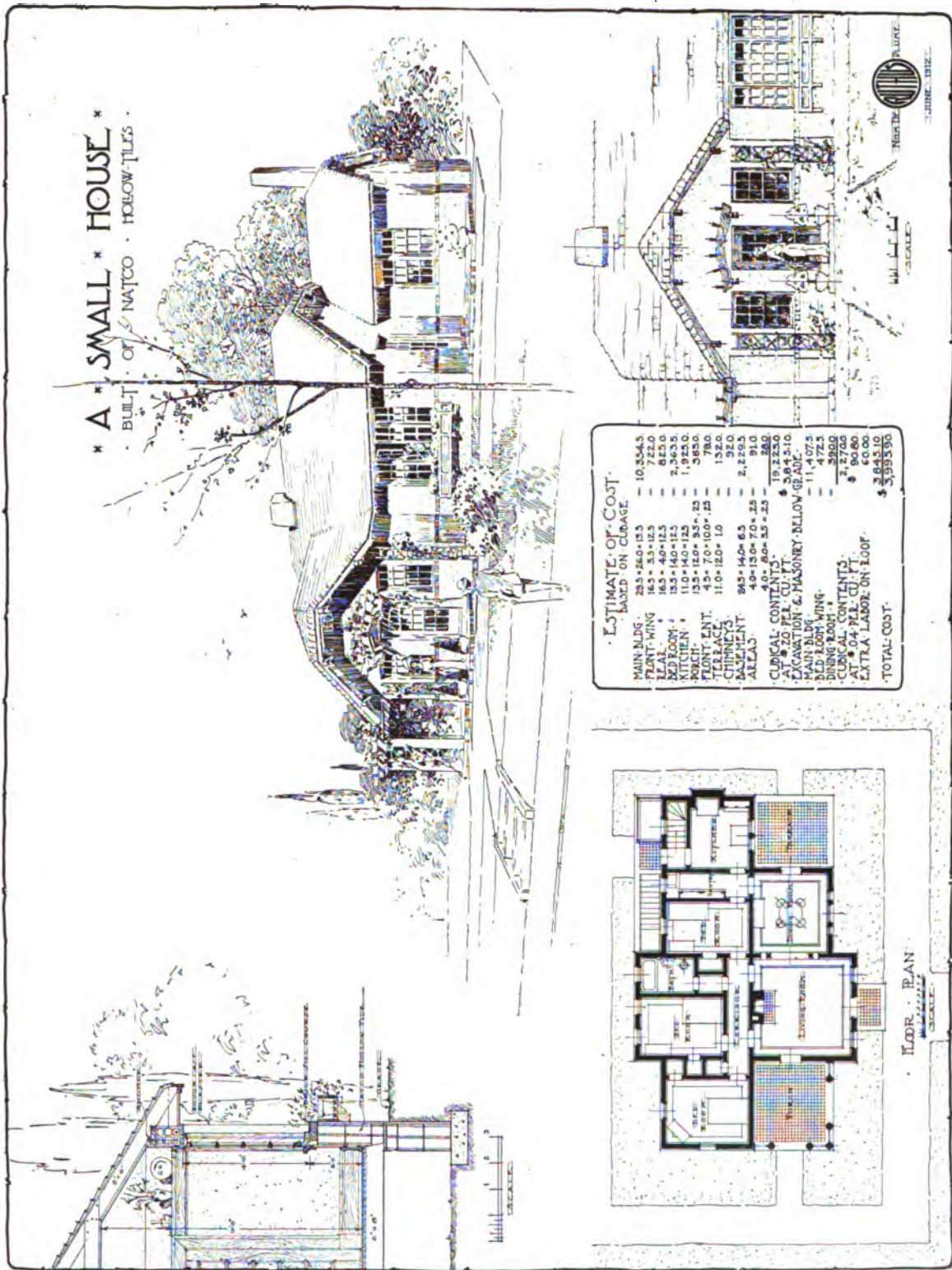
# NATCO·HOLLOW·TILE HOUSE BRICKBUILDER COMPETITION

SUBMITTED BY



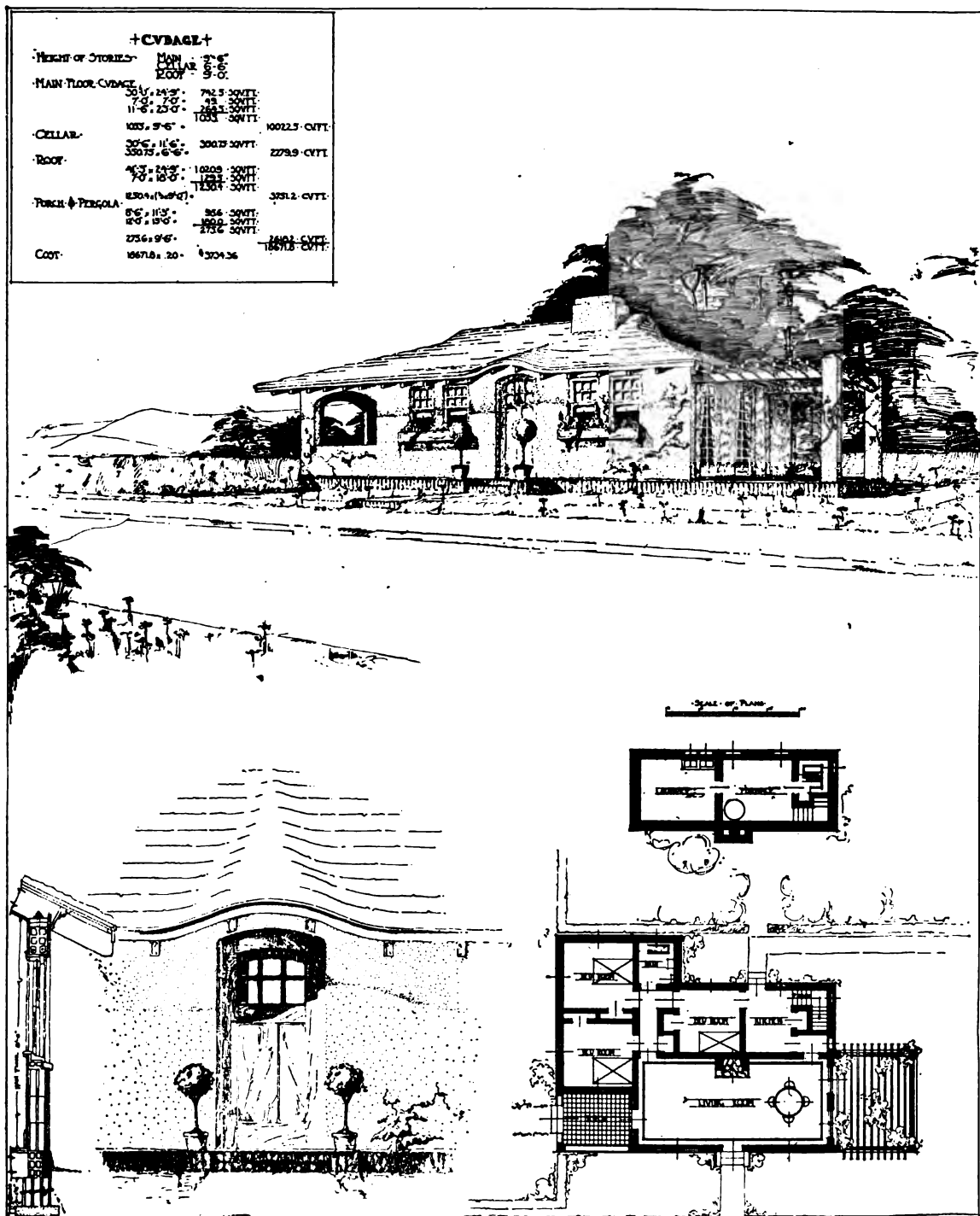
Design Submitted by Orville F. Bollinger, Toledo, Ohio





Design Submitted by V. H. Nellenbogen, Calgary, Alta., Can.





SUBMITTED BY

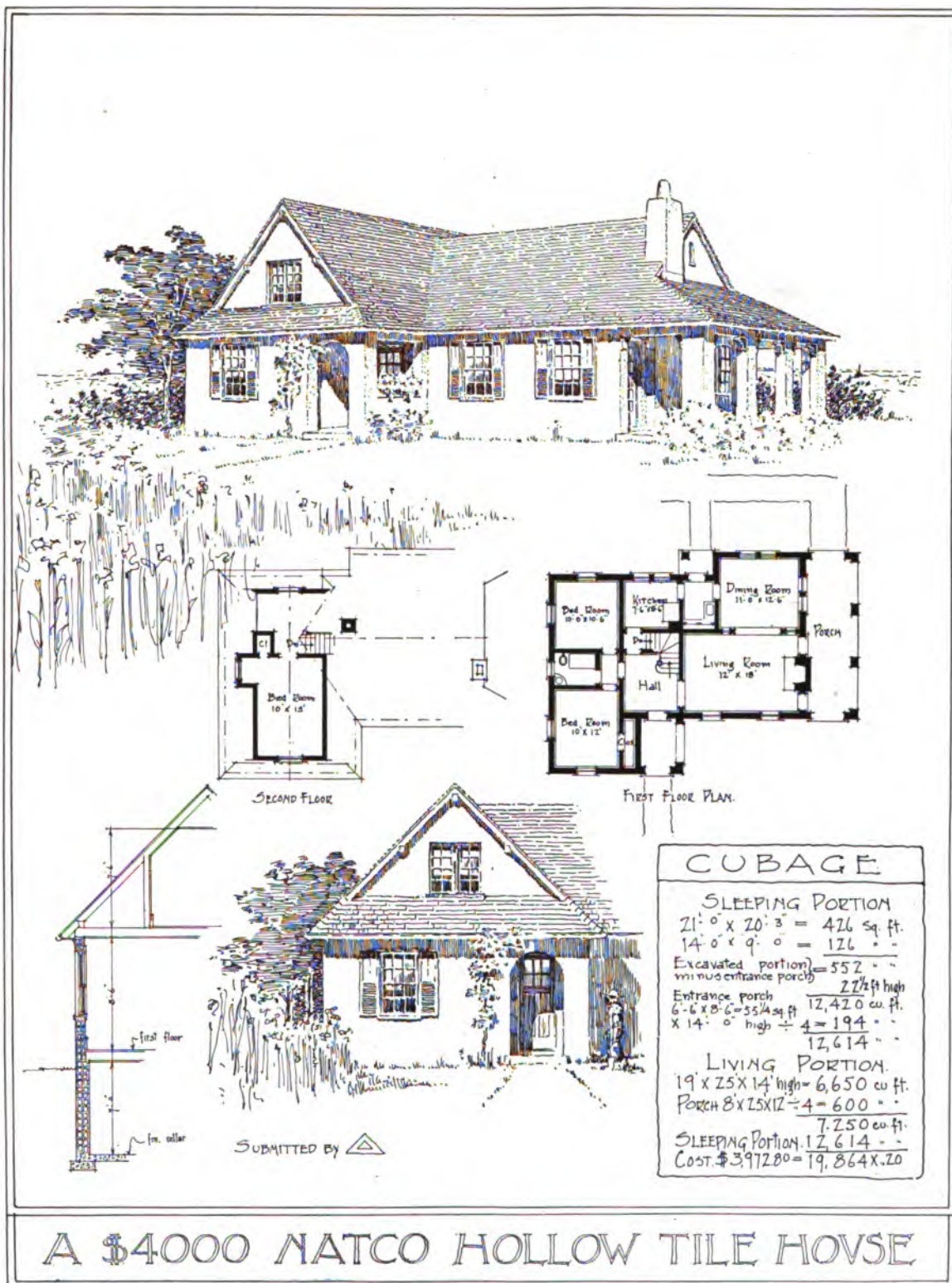


A SMALL BUNGALOW

TO COST \$4000.00

Design Submitted by J. Byers Hays, Sewickley, Pa.



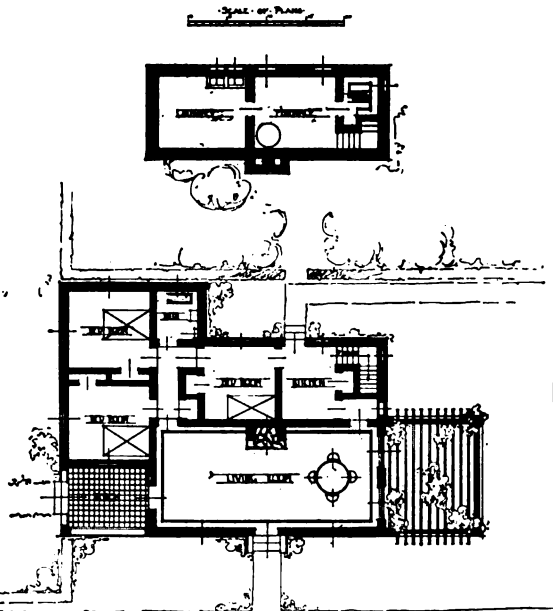
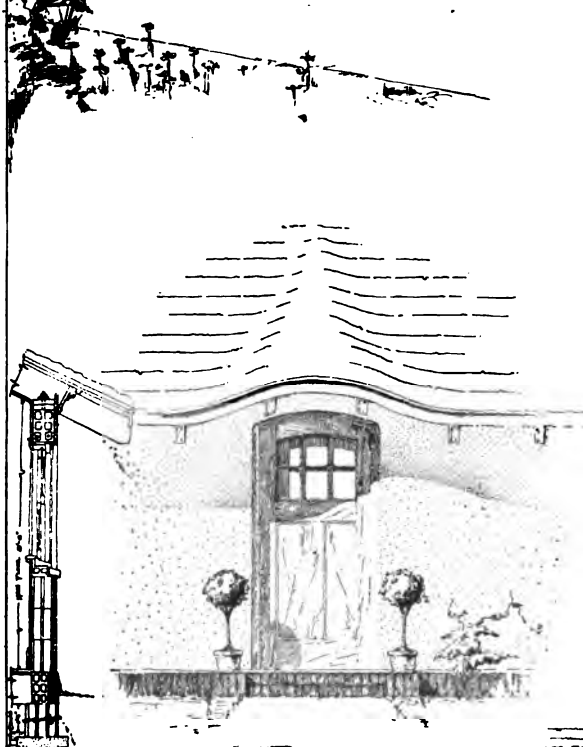
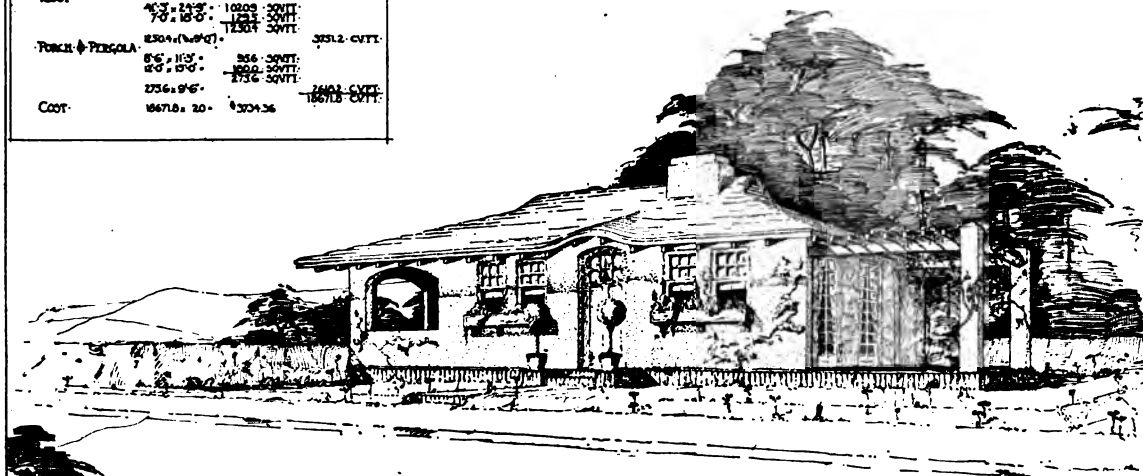


## A \$4000 NATCO HOLLOW TILE HOUSE

Design Submitted by Oscar J. Arnemann, Weehawken Heights, N. J.



+CVBAGE+			
HEIGHT OF STORIES-	MAIN	9'-6"	
	ROOF	9'-0"	
MAIN FLOOR CVBAGE			
	30'0" x 24'0"	742.5 SQFT.	
	7'0" x 7'0"	49 SQFT.	
	11'-0" x 25'0"	275.5 SQFT.	
	103'0" x 9'-6"	1033 SQFT.	10022.5 SQFT.
CELLAR			
	30'0" x 11'-6"	346.75 SQFT.	
	300'0" x 6'-6"	2778.9 SQFT.	2778.9 SQFT.
ROOF			
	4'0" x 24'0"	102.00 SQFT.	
	7'0" x 10'0"	70.00 SQFT.	
	8'30" x 14'0"	117.00 SQFT.	
PORCH & PERGOLA			
	8'6" x 11'0"	94.6 SQFT.	
	6'0" x 6'0"	36.0 SQFT.	
	27'6" x 9'-6"	265.1 SQFT.	
COOT.			
	1667'0" x 20"	3334.36 SQFT.	2667.0 SQFT.



SUBMITTED BY

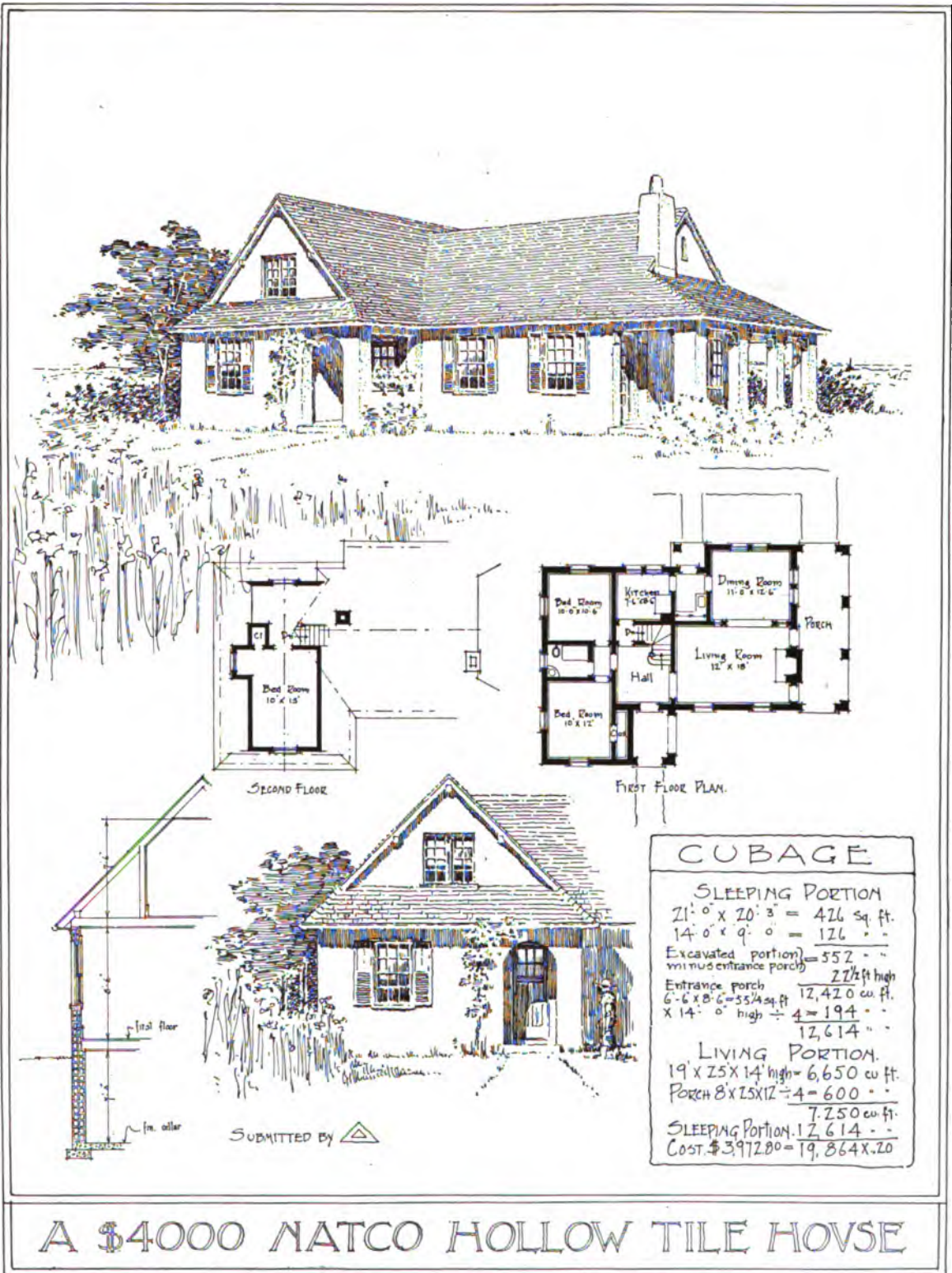


+ A SMALL BUNGALOW +

TO COST \$4000.00

Design Submitted by J. Byers Hays, Sewickley, Pa.





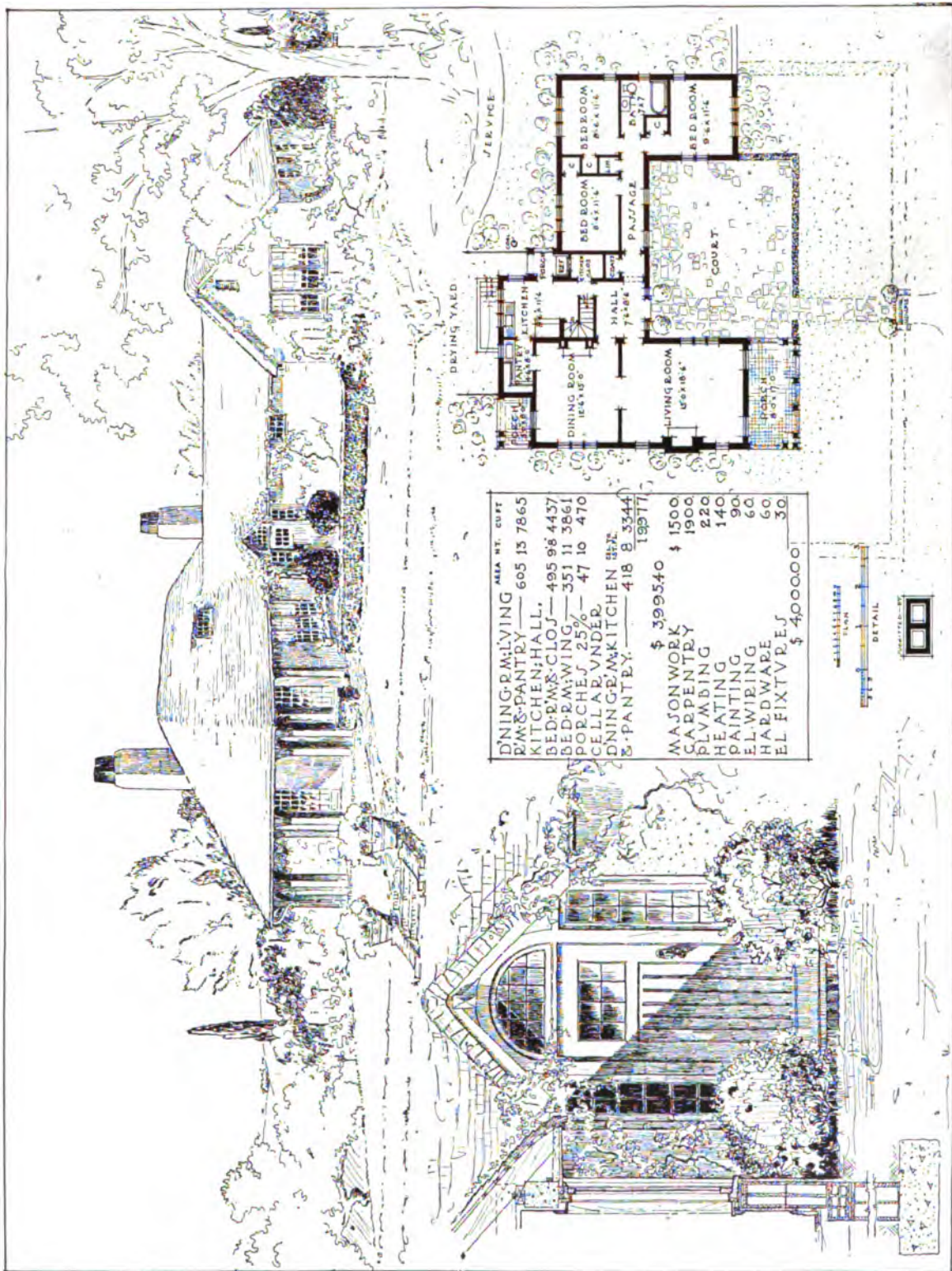
## A \$4000 NATCO HOLLOW TILE HOUSE

Design Submitted by Oscar J. Arnemann, Weehawken Heights, N. J.









Design Submitted by Lovett Rile, New York, N. Y.



SUBMITTED BY

## SMALL TILE HOUSE TO COST \$4000

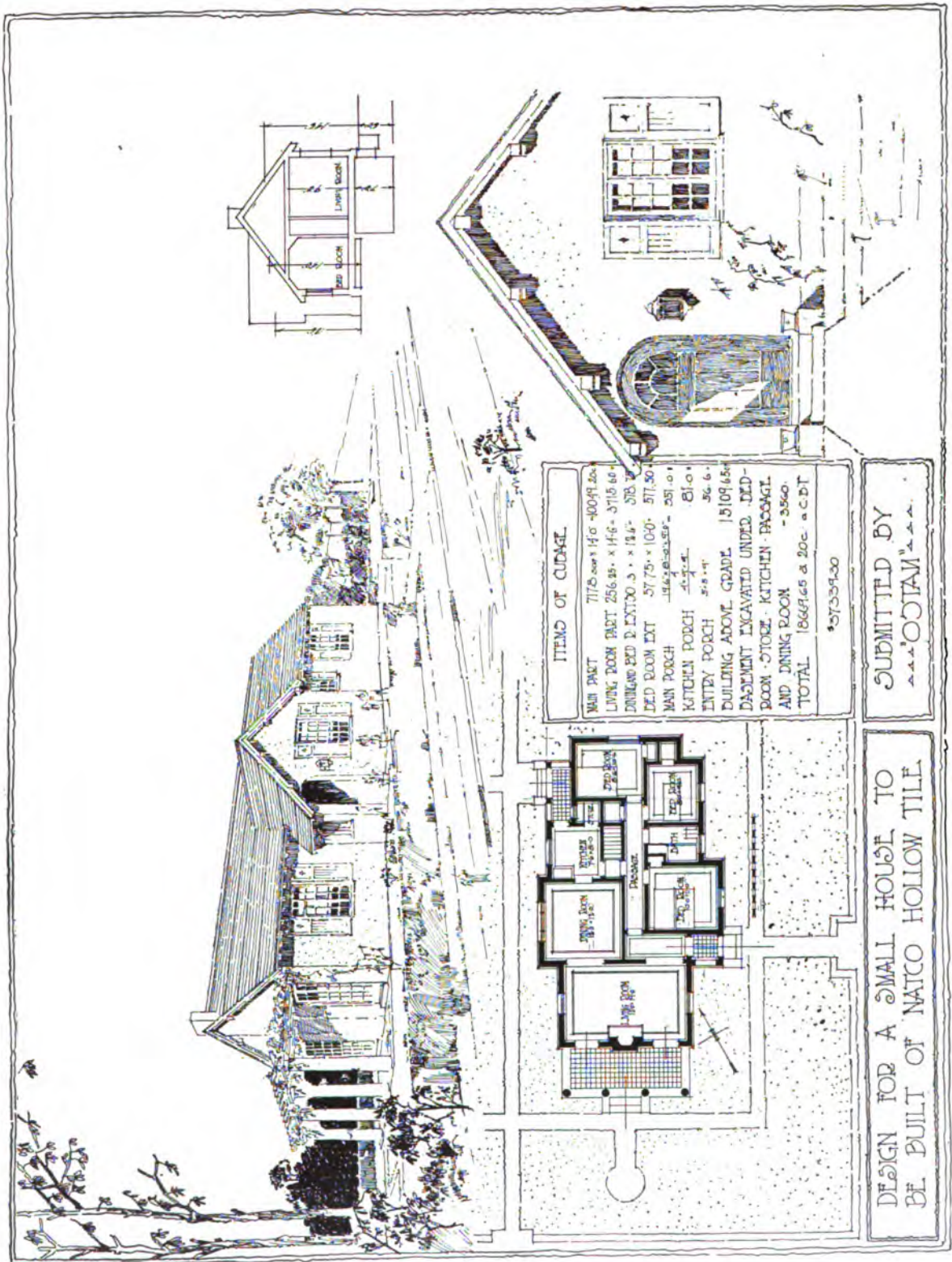
### - BRICKBUILDER - COMPETITION -

**CUBICAL CONTENTS**

CUBAGE MAIN FLOOR AREA - 25.5225 = 845 Sg. Ft.  
 HEIGHT OF STORIES - CELLAR - 7-10  
 MAIN FLOOR 8-4  
 HEIGHT FROM TO ROOF - 5-6  
 CUBIC CONTENTS OF MAIN HOUSE - 11,000 cu. ft.  
 KITCHEN & BATH EXTENSION AREA 14' x 6' x 8' 6" = 720 cu. ft.  
 HEIGHT OF STORIES - CELLAR 7-10  
 MAIN FLOOR 8-4  
 CUBIC CONTENTS OF EXTENSION - 1,008 cu. ft.  
 PORCH AREA - 6' x 11' x 8' 6" = 580 cu. ft.  
 HEIGHT 8-6" x 11' x 8' 6" = 864 cu. ft.  
 # OF PORCH TOTAL = 800 cu. ft.  
 TOTAL CU. FT. 12,008 + 720 + 800 = 13,528  
 13,528 CU. FT. = 4020 - 13,528 TOTAL COST  
 CELLAR UNDER PAVING ROOM, KITCHEN AND BATH

Design Submitted by Theodore O. Appel, New Haven, Conn.

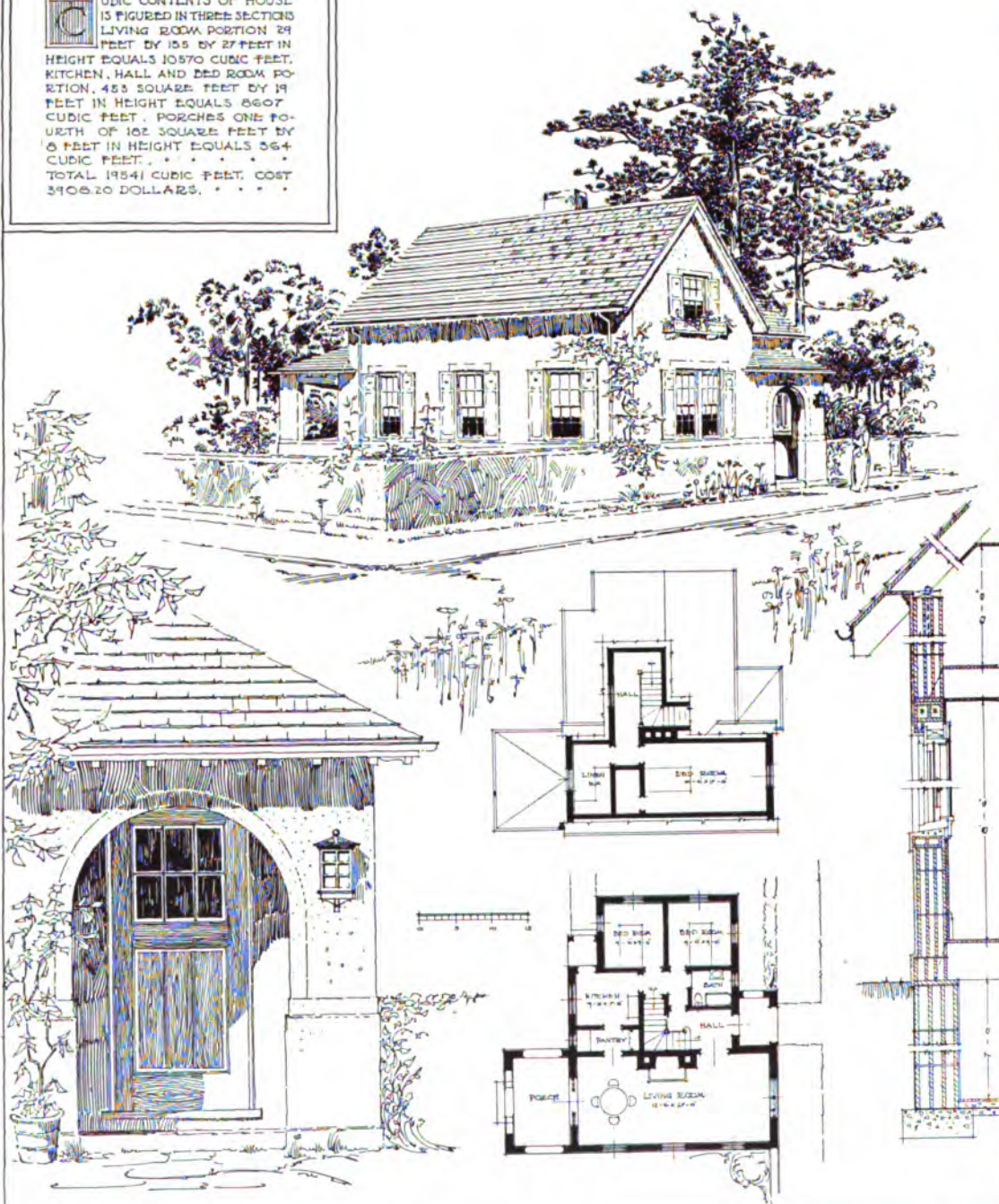




Design Submitted by O. J. Holm, Poughkeepsie, N. Y.



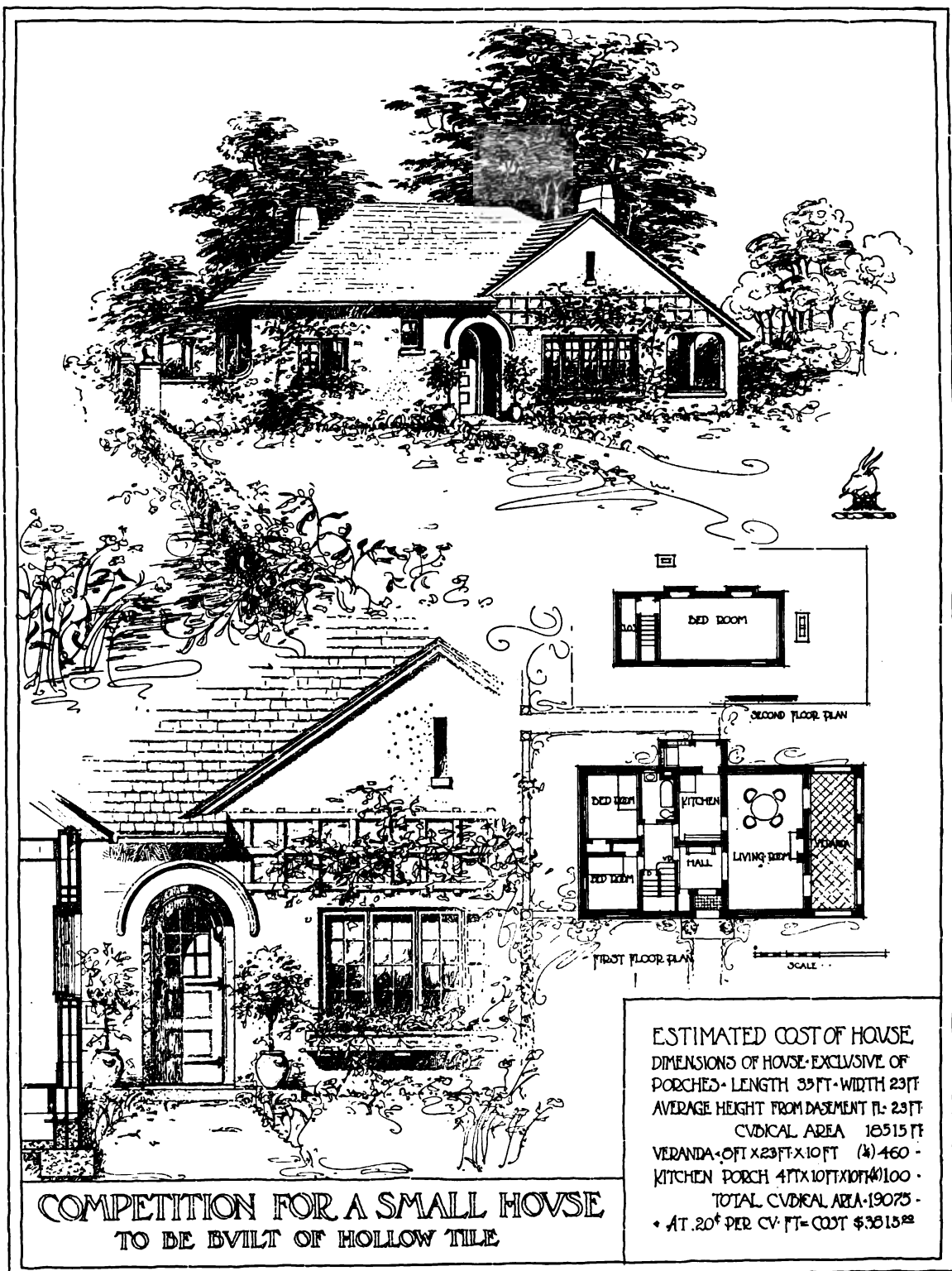
**C**UBIC CONTENTS OF HOUSE  
 IS FIGURED IN THREE SECTIONS  
 LIVING ROOM PORTION 29  
 FEET BY 15.5 BY 27 FEET IN  
 HEIGHT EQUALS 10570 CUBIC FEET.  
 KITCHEN, HALL AND BED ROOM POR-  
 TION, 453 SQUARE FEET BY 19  
 FEET IN HEIGHT EQUALS 8607  
 CUBIC FEET. PORCHES ONE FO-  
 URTH OF 102 SQUARE FEET BY  
 8 FEET IN HEIGHT EQUALS 364  
 CUBIC FEET. \* \* \* \* \*  
 TOTAL 19541 CUBIC FEET. COST  
 3906.20 DOLLARS. \* \* \* \* \*



COMPETITION FOR A SMALL HOUSE  
 TO COST FOUR THOUSAND DOLLARS

Design Submitted by J. Martin Brown, New York, N. Y.

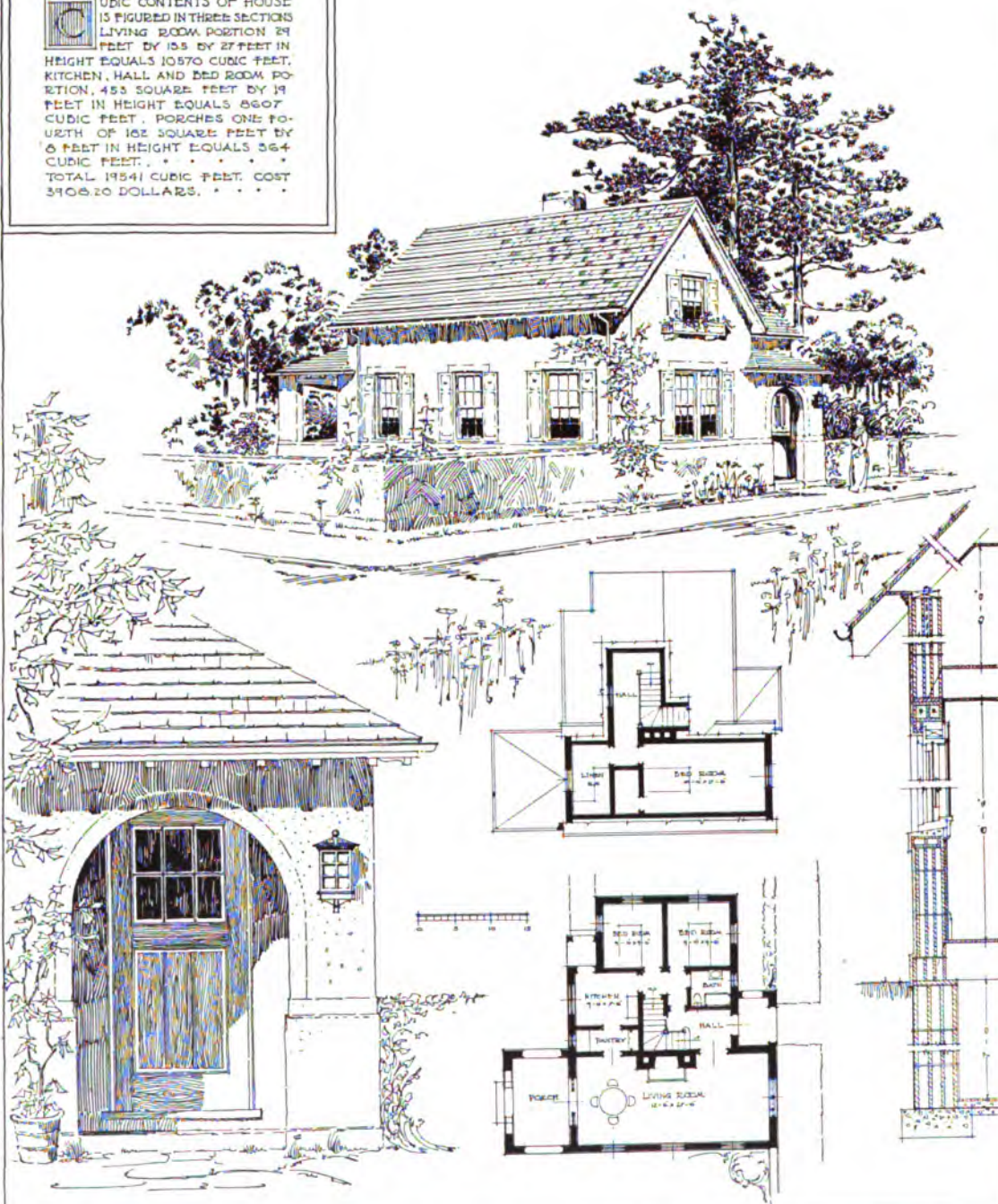




Design Submitted by Jerauld Dahler, New York, N. Y.



**C**UBIC CONTENTS OF HOUSE  
IS FIGURED IN THREE SECTIONS  
LIVING ROOM PORTION 29  
FEET BY 15.5 BY 27 FEET IN  
HEIGHT EQUALS 10570 CUBIC FEET.  
KITCHEN, HALL AND BED ROOM POR-  
TION, 453 SQUARE FEET BY 19  
FEET IN HEIGHT EQUALS 8607  
CUBIC FEET. PORCHES ONE FO-  
URTH OF 102 SQUARE FEET BY  
6 FEET IN HEIGHT EQUALS 364  
CUBIC FEET. . . . .  
TOTAL 19541 CUBIC FEET. COST  
3906.20 DOLLARS. . . . .

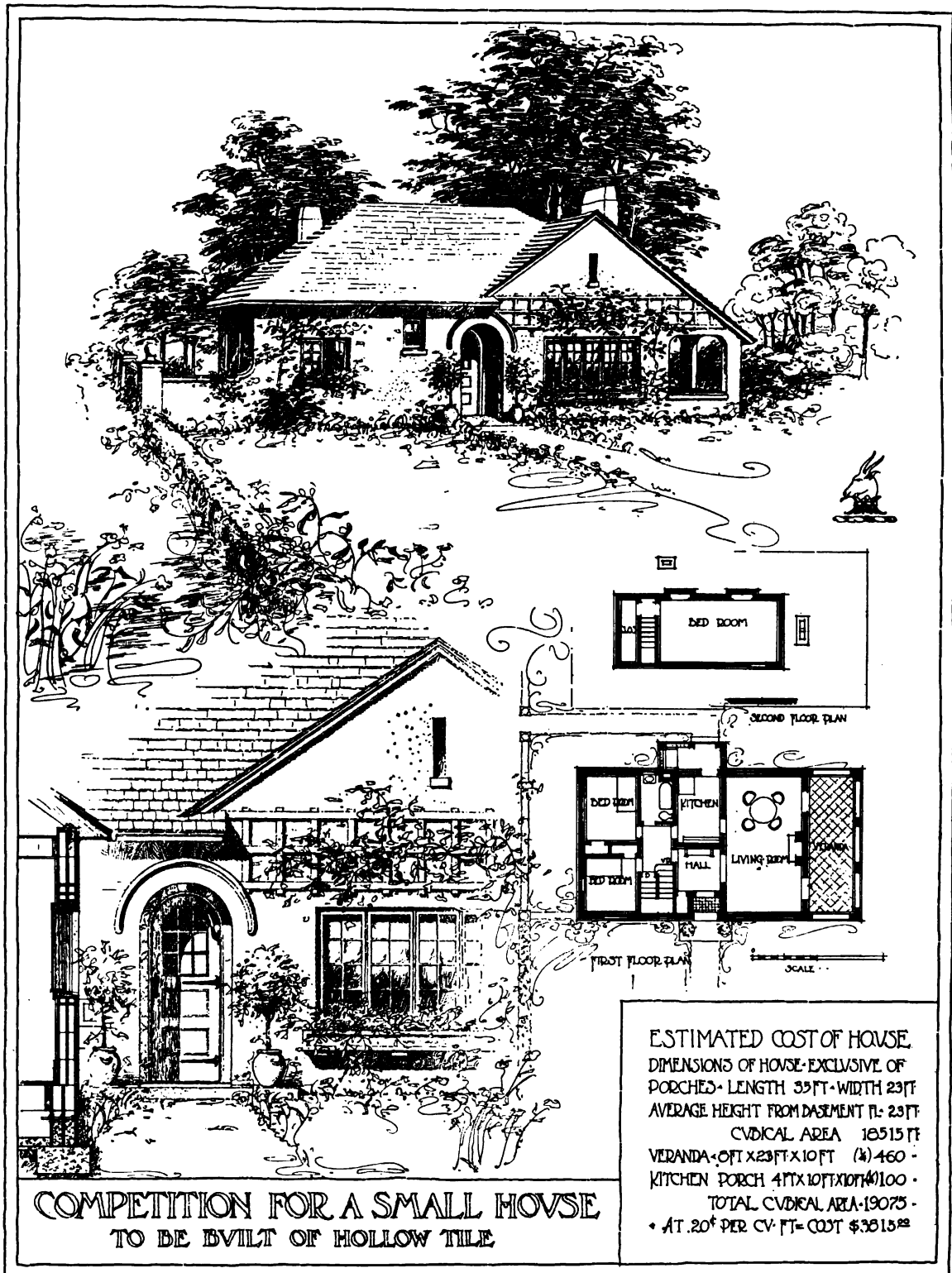


• SUBMITTED BY •

COMPETITION FOR A SMALL HOUSE  
TO COST FOUR THOUSAND DOLLARS

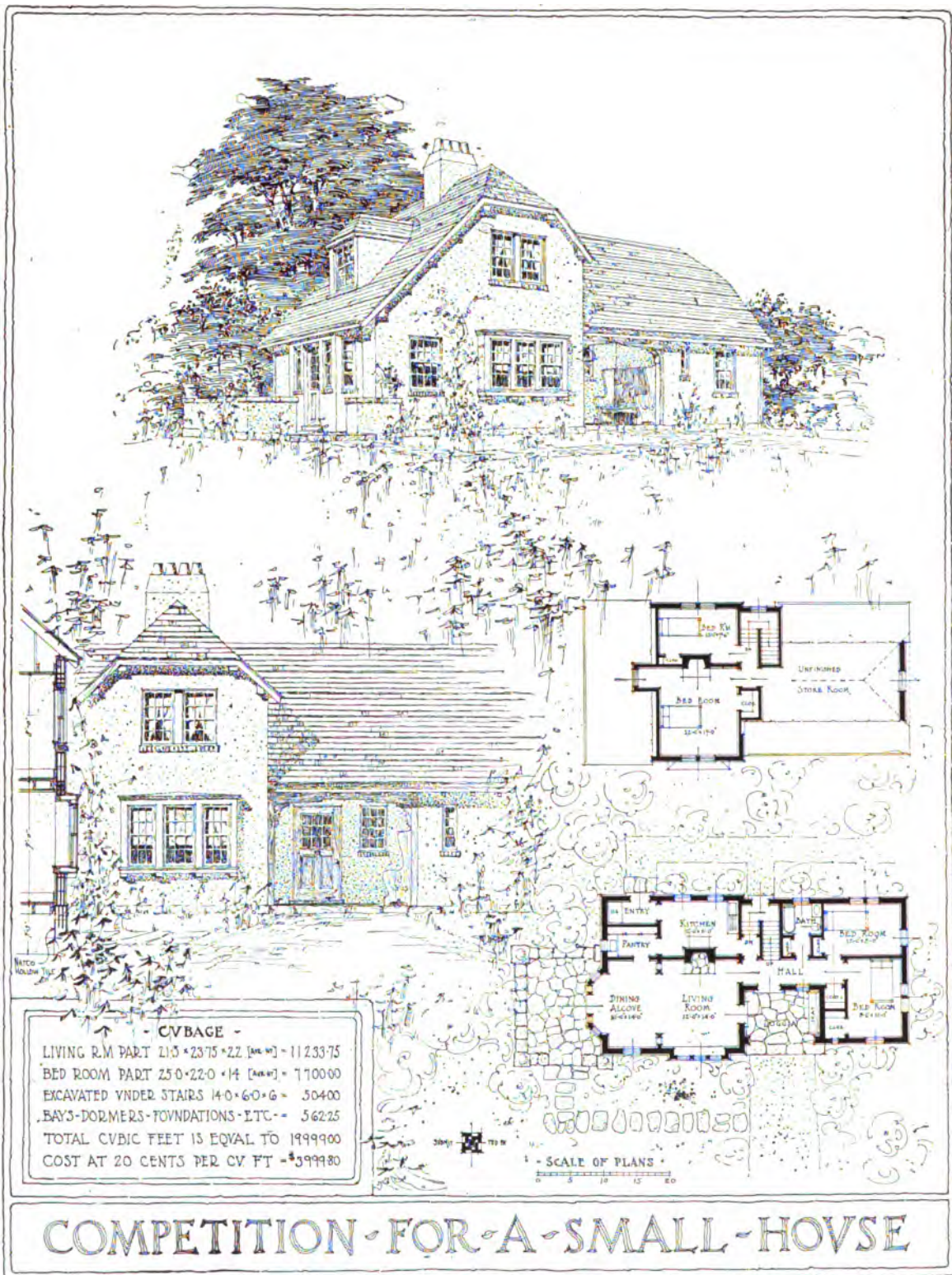
Design Submitted by J. Martin Brown, New York, N. Y.





Design Submitted by Jerauld Dahler, New York, N. Y.

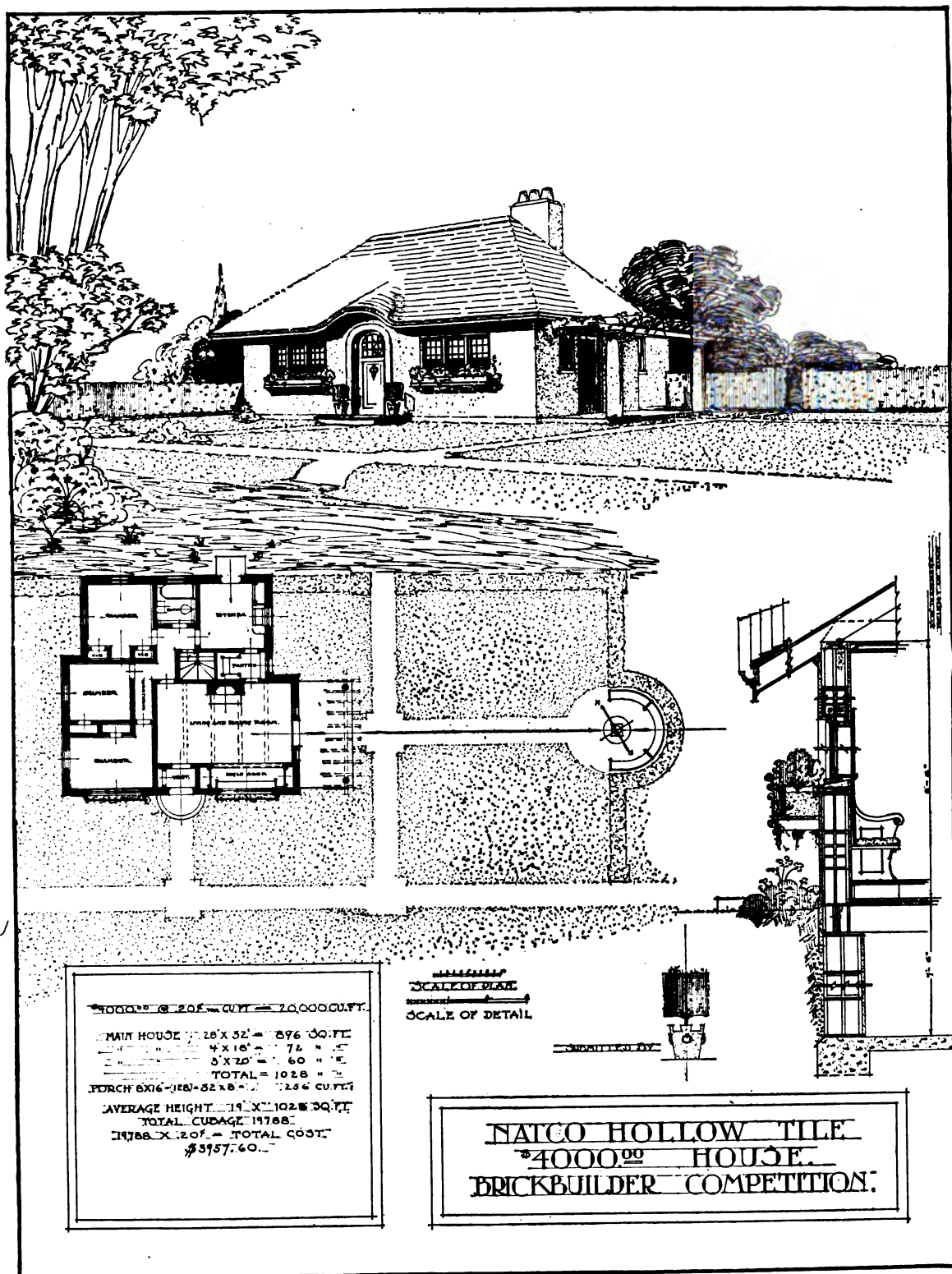




## COMPETITION FOR A SMALL HOUSE

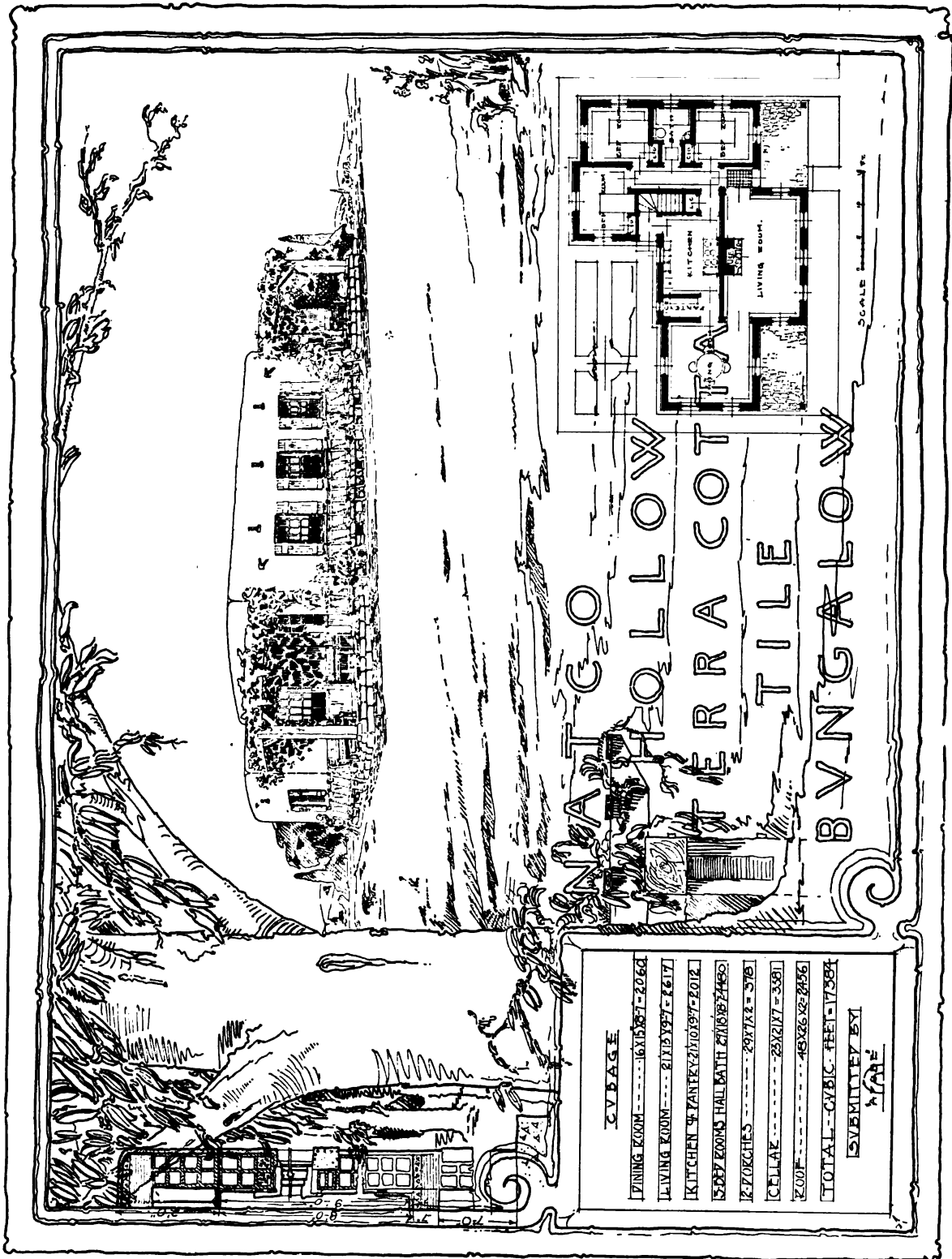
Design Submitted by Ralph J. Batchelder, Boston, Mass.





Design Submitted by Harry Alfious Lewis, Boston, Mass.





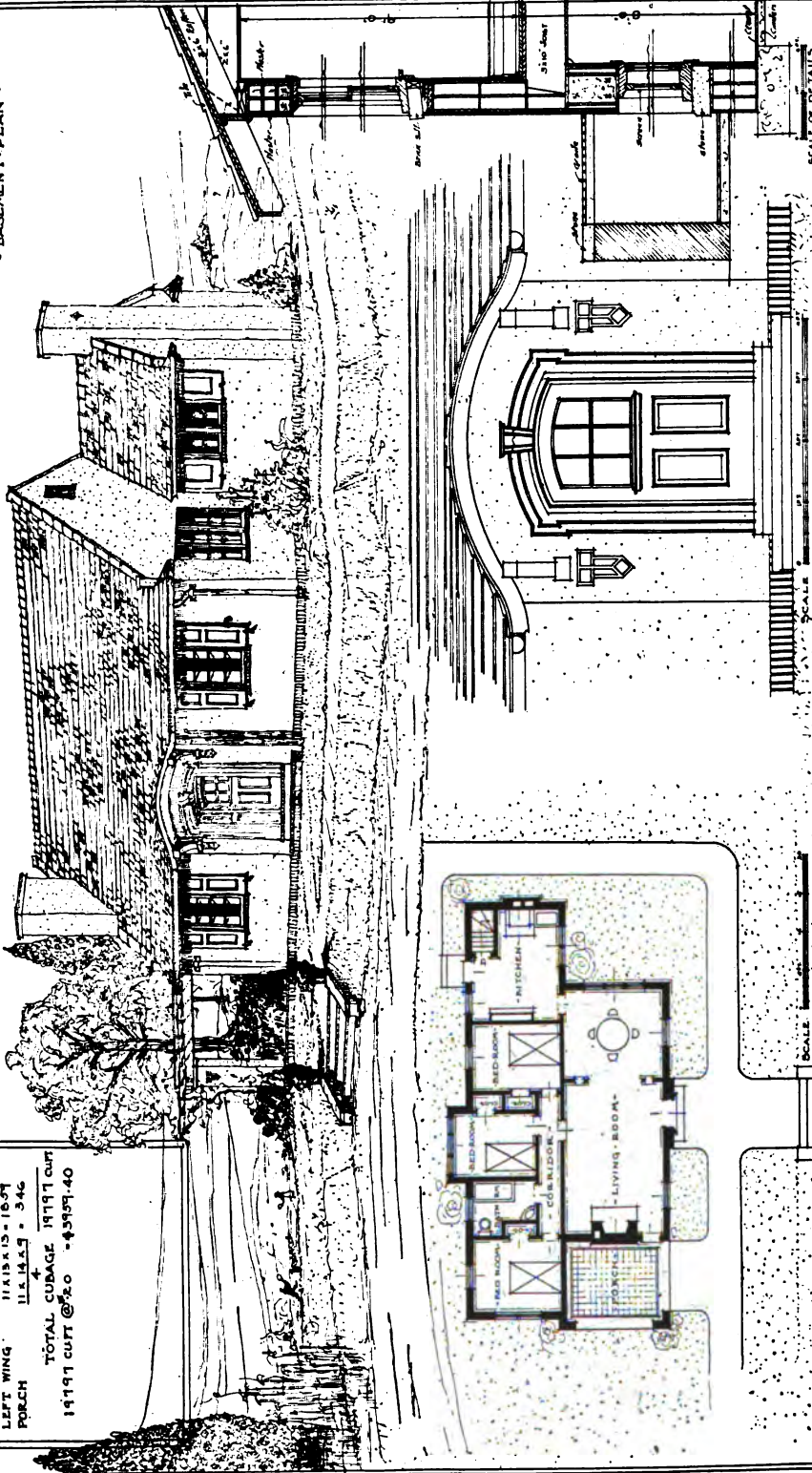
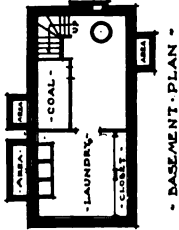
Design Submitted by B. Brown and C. Foster, Washington, D. C.



# " CUBICAL CONTENTS -

PORTION OF HOUSE UNDER KITCHEN AND  
ADJOINING BED ROOM AND CLOSET  
WAS EXCAVATED FOR BASEMENT  
RIGHT WING 11A13A18 = 25'14 CWT  
REMAIN OF EXCAVATED  
PORTION 16A13A21 = 43'68  
MAIN BUILDING 16A13A15 = 71'40  
NOT EXCAVATED 16A13A15 = 31'20  
BAY IN BED ROOM 10A2-418 = 3'90  
LEFT WING 11A13A13 = 18'97  
PORCH 11A13A5 = 3'46

TOTAL CUBAGE 19197 CWT  
19197 CWT @ \$2.0 = \$3839.40

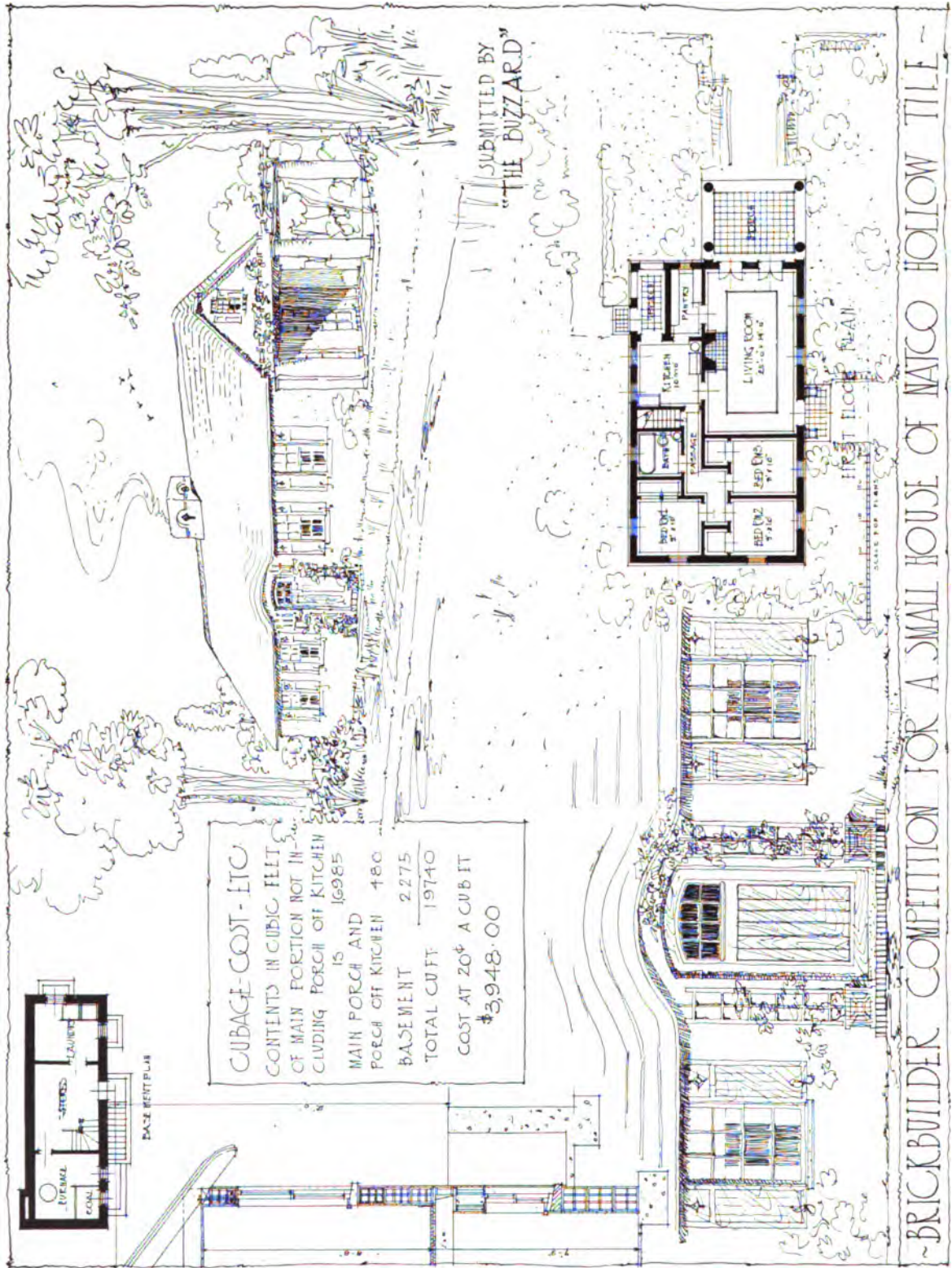


## A SMALL HOUSE OF NATCO HOLLOW TILE

SUBMITTED BY

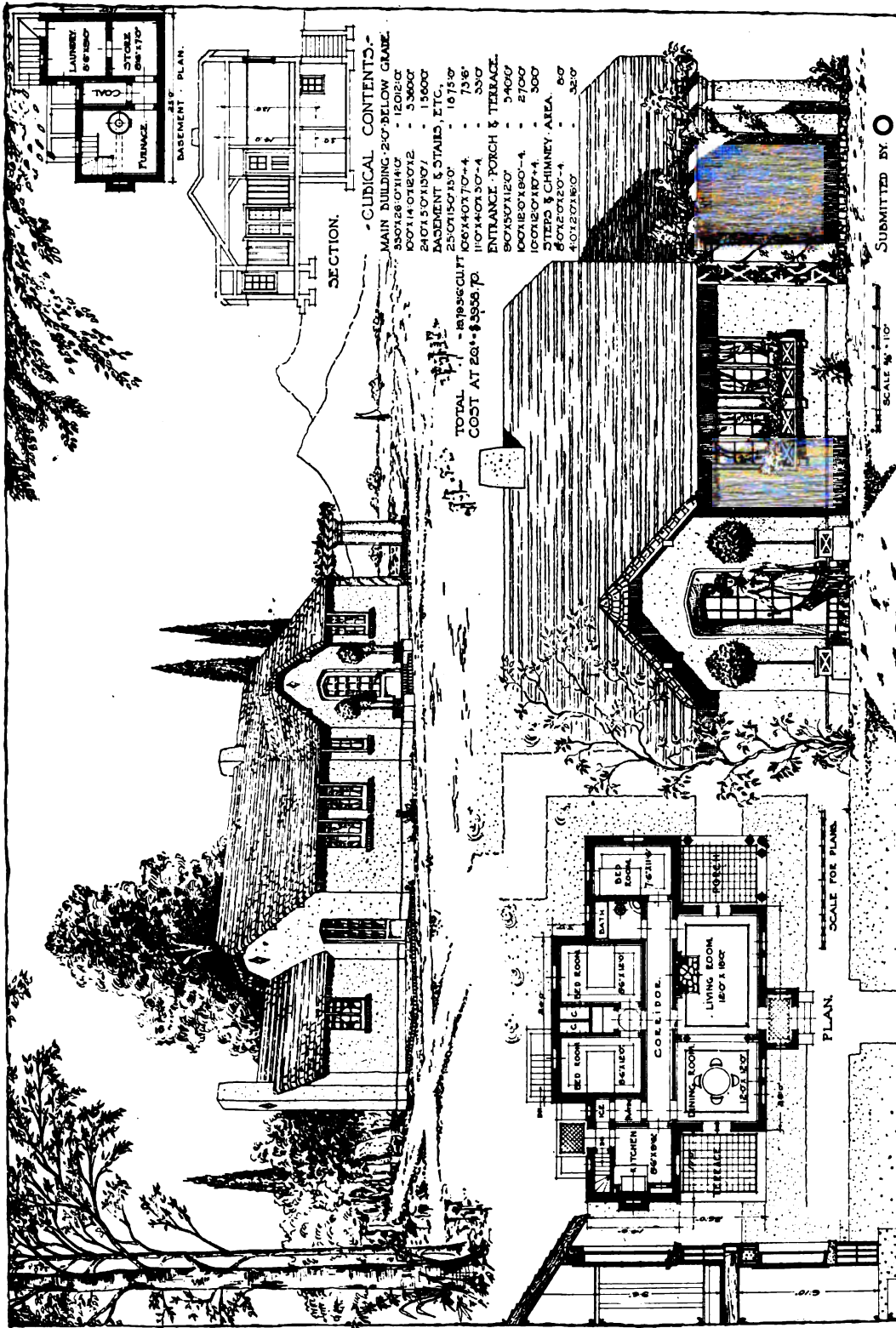
Design Submitted by Charles A. Scheuringer, Philadelphia, Pa.





Design Submitted by Joseph McCann, Boston, Mass.

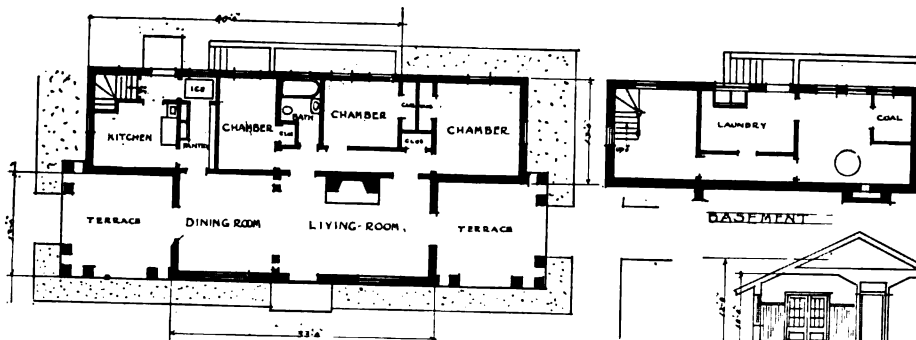
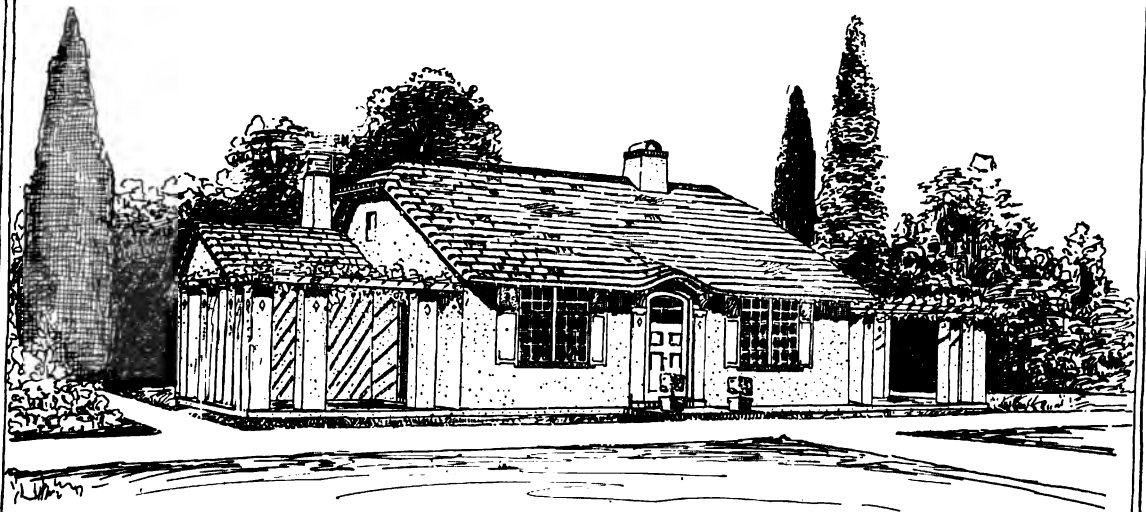




# ● A SMALL HOVSE OF NATCO HOLLOW TILE. ●

Design Submitted by Alexandre Mercil, Montreal, Que., Can.





FIRST FLOOR PLAN

# CUBICAL CONTENTS

MAIN BUILDING ABOVE GRADE  
 $33'-0" \times 26'-0" \times 12'-0" = 10,296$  CU. FT.

WINGS ABOVE GRADE  
 $2 - (11'-0" \times 13'-0" \times 10'-5") = 3,074.50$  C. FT.

PORCHES  
 $2 - (13'-0" \times 14'-0" \times 8'-5") = 397$  C. FT.

BASEMENT BELOW GRADE  
 $13'-0" \times 40'-0" \times 6'-0" = 3,120$  C. FT.

EXCAVATIONS UNDER LIVING ROOM

DINING AND BED ROOMS

$12'-0" \times 33'-0" \times 2'-0" = 792$  CU. FT.

$16'-0" \times 13'-0" \times 2'-0" = 496$  " "

AREAS

$26'-0" \times 14'-0" \times 3'-0" = 280$  CU. FT.

TOTAL CURAGE = 19,345.50 CU. FT.

COST AT 20¢ 3,869.10

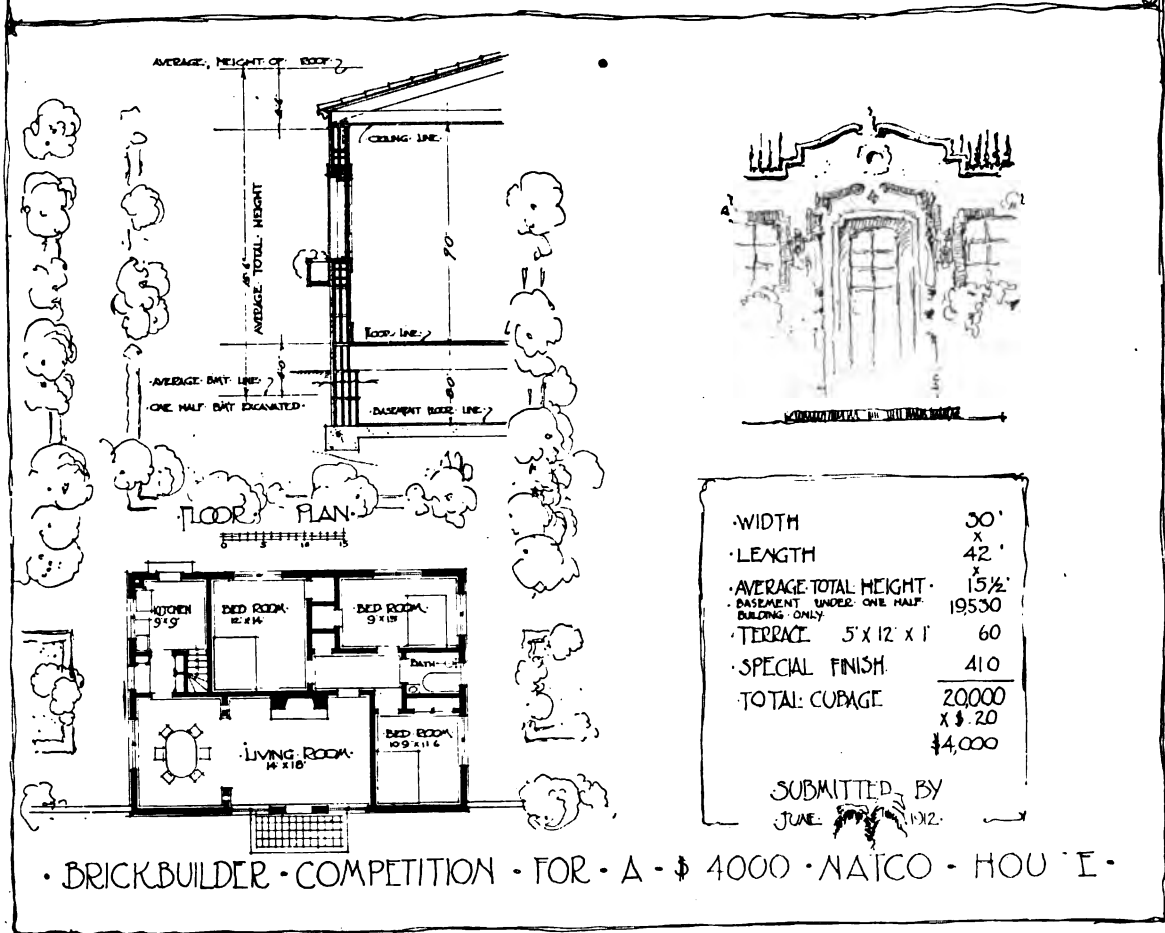
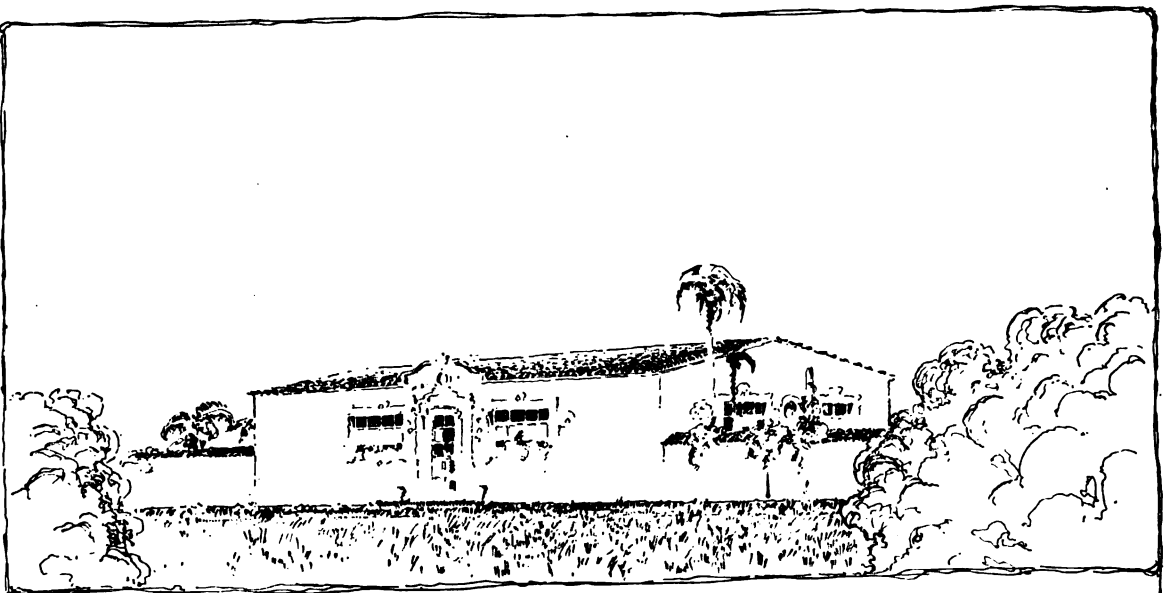


A SMALL NATCO HOLLOW TILE BUNGALOW

DESIGNED BY

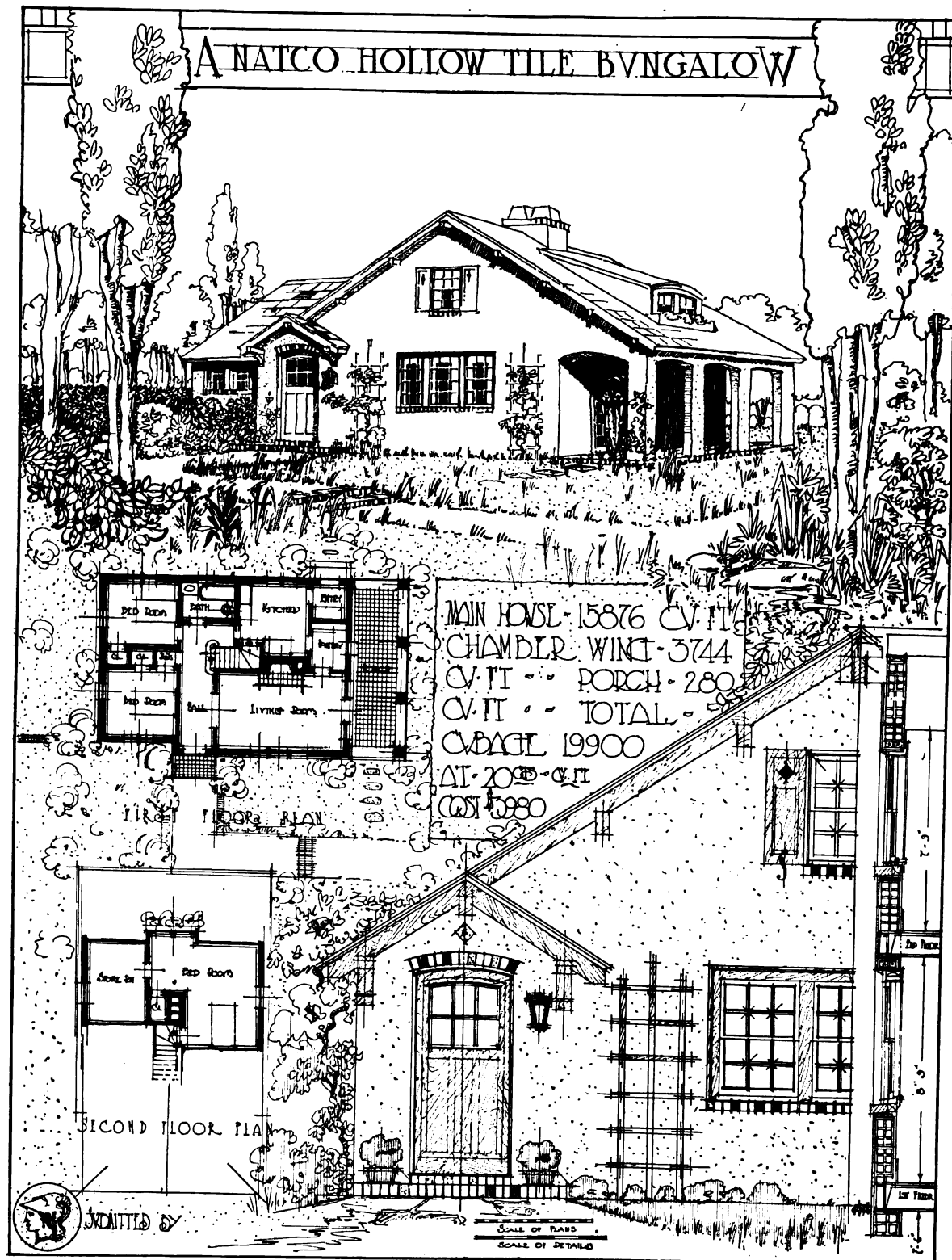
Design Submitted by Albert M. Kreider, Boston, Mass.





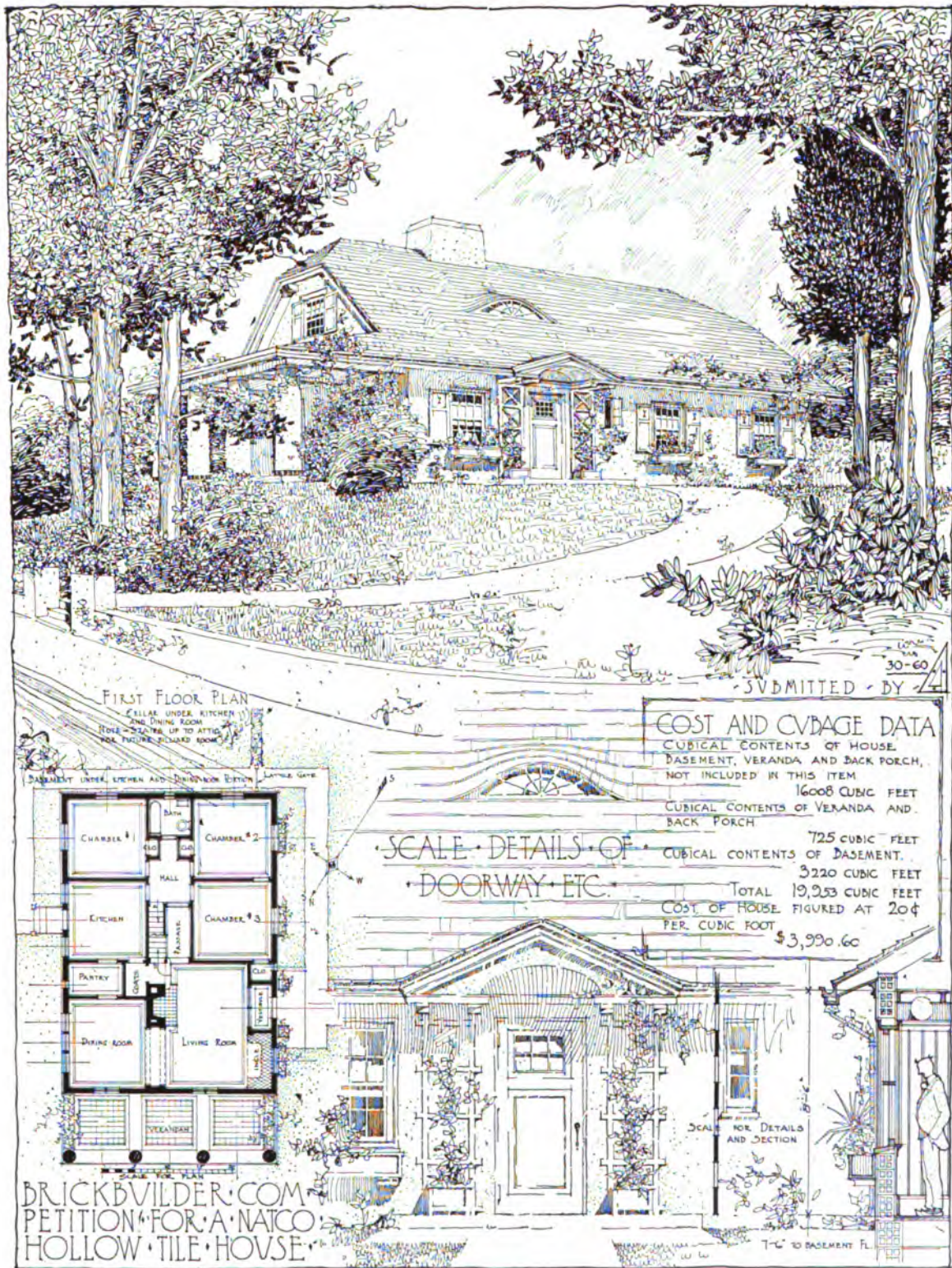
Design Submitted by Ernest E. Weihe, San Francisco, Cal.





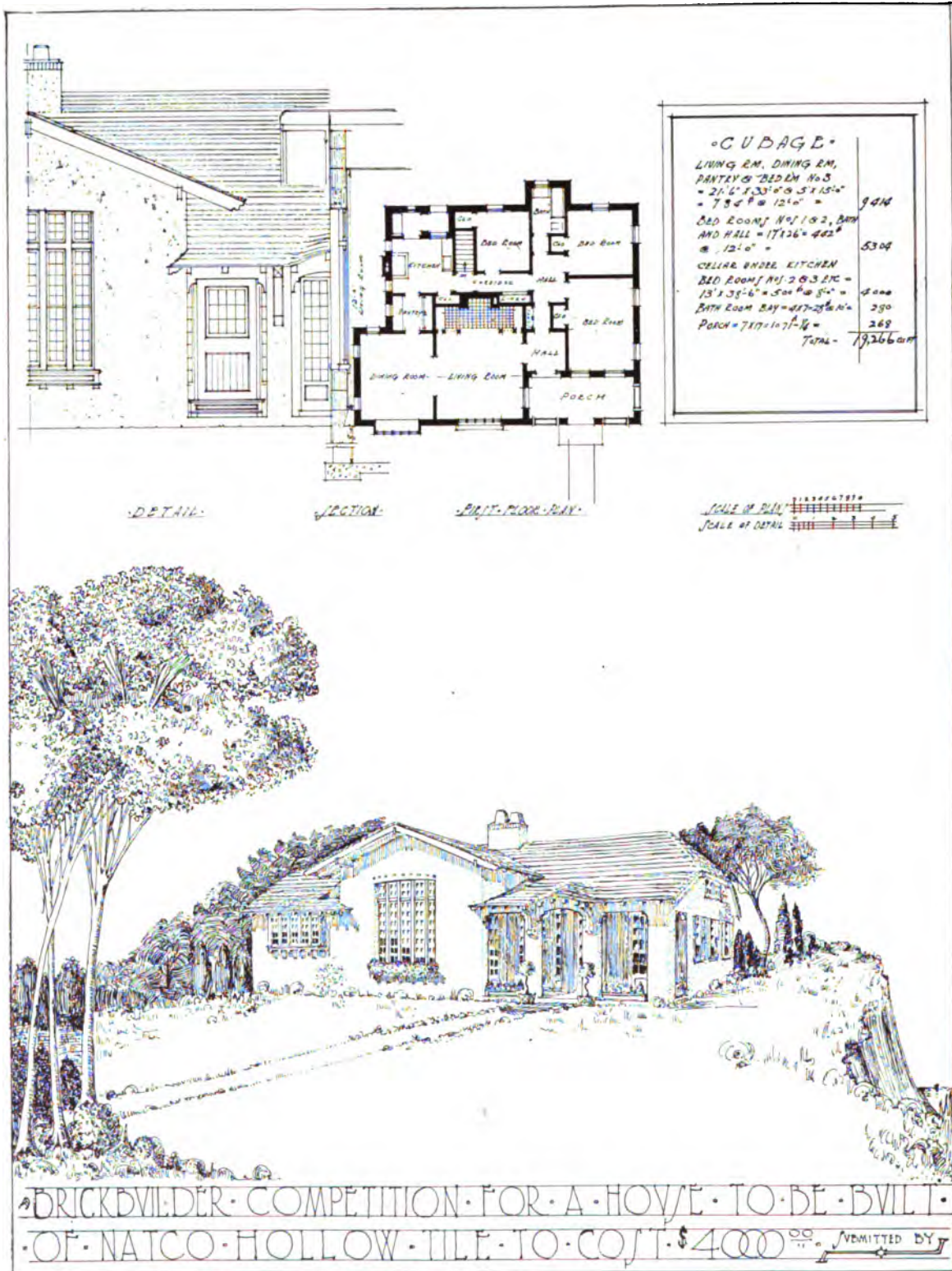
Design Submitted by G. F. Blount and R. M. Powers, Boston, Mass.





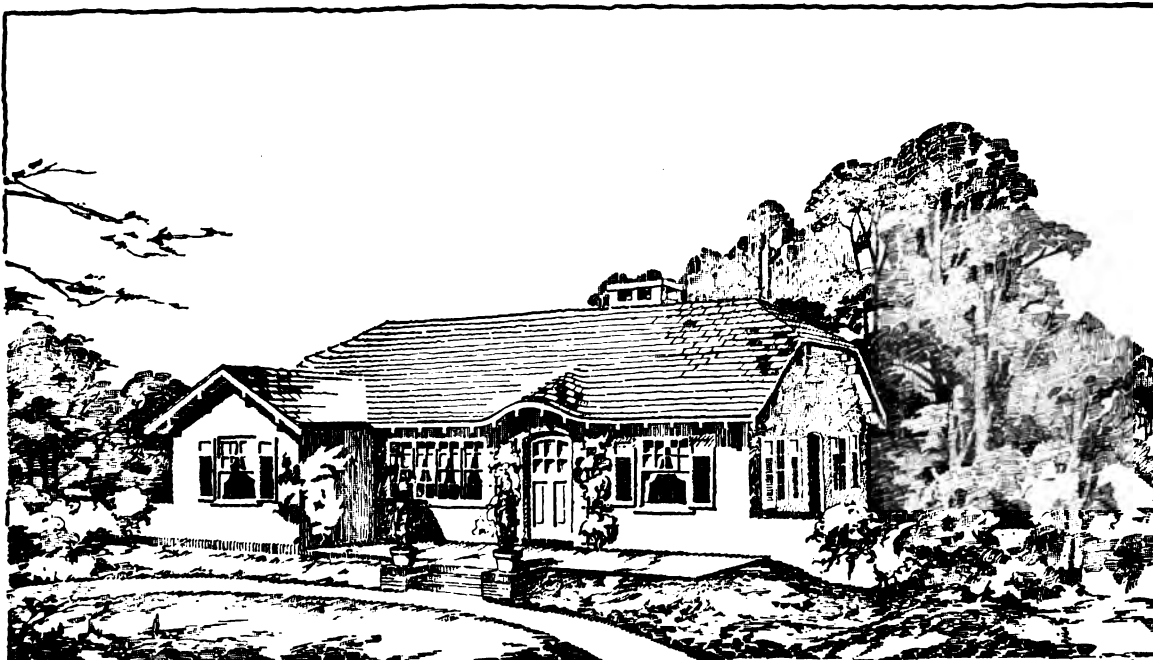
Design Submitted by Richard M. Powers, Boston, Mass.



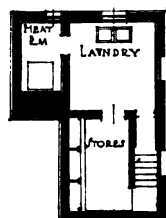


Design Submitted by William F. Thompson, Brooklyn, N. Y.

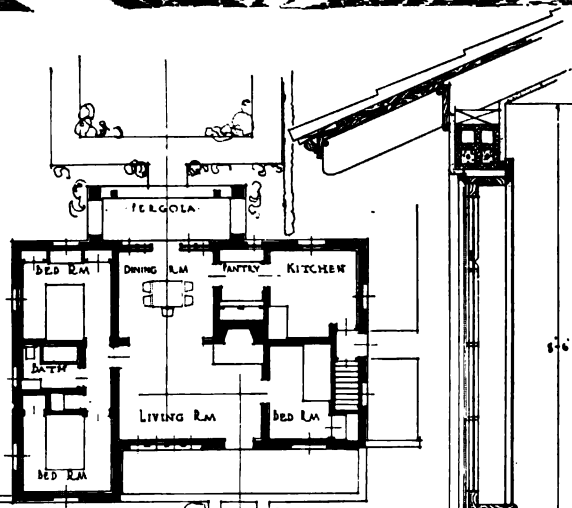




# NAT-CO BRICKBVLDER COMPLETION FOR A \$4000. BVNGALOW



BASEMENT PLAN



FIRST FLOOR PLAN

ITEMS	
AREA WITHOUT PERGOLA	1280 SQ. FT.
AREA WITH PERGOLA	1350 SQ. FT.
LYNCH	12800 C.Y. FT.
EXCAVATED PORTION	20000 C.Y. FT.
EXCAVATED	25000 C.Y. FT.
WALLS	4.0' x 12" x 1' C.Y.
PERGOLA	20000 C.Y. FT.
PORT AT \$20 PER C.Y.	\$ 3500
EXCAVATING & MASONRY	
WROTEWORK	
PLASTERING	
LIVING	
HEATING & WIRING	
BRICKLAYER	

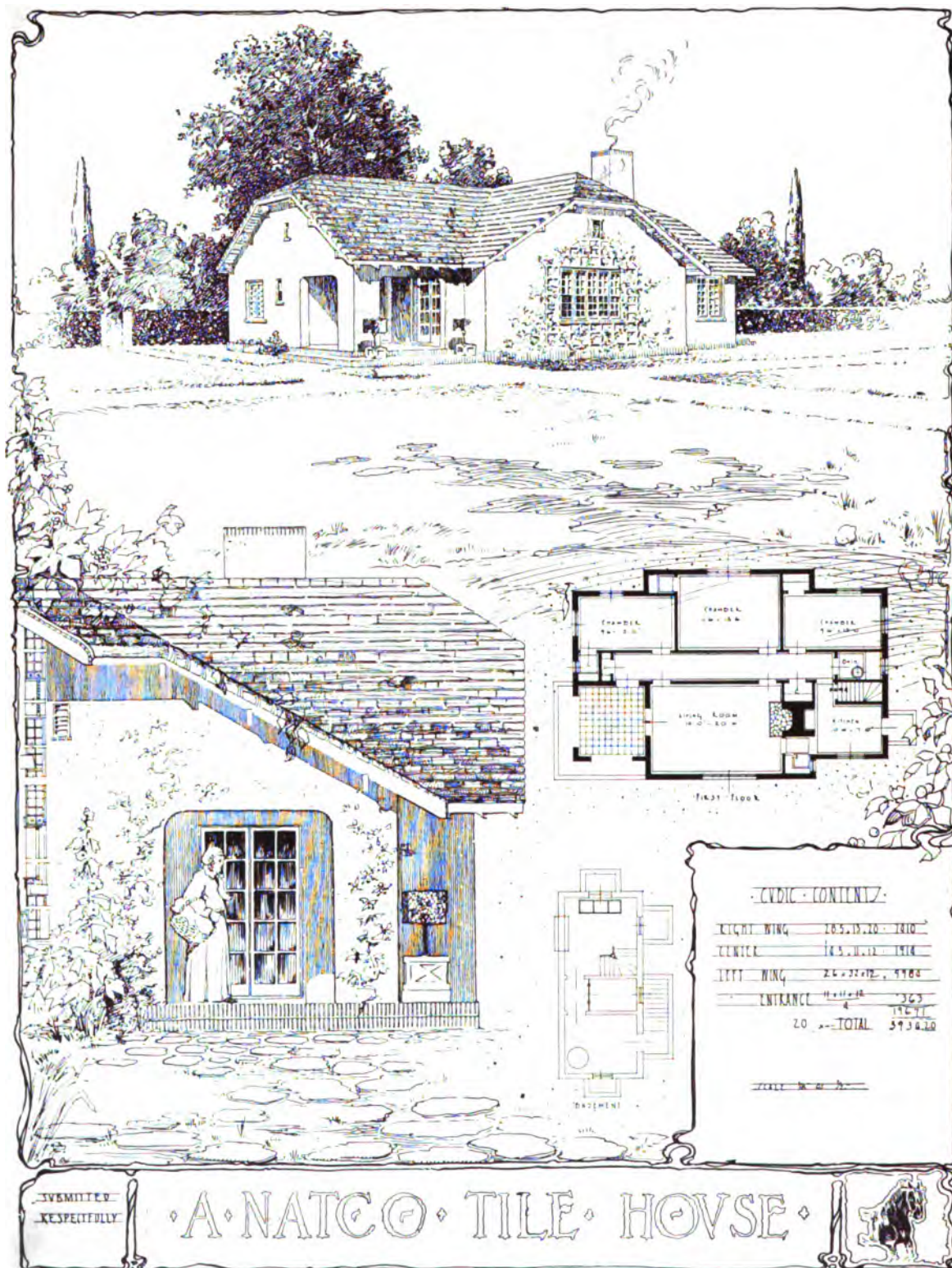
SCALES IN FEET  
SECTION  
PLANS  
PERSPECTIVE  
SUBMITTED BY



ONE GABLE

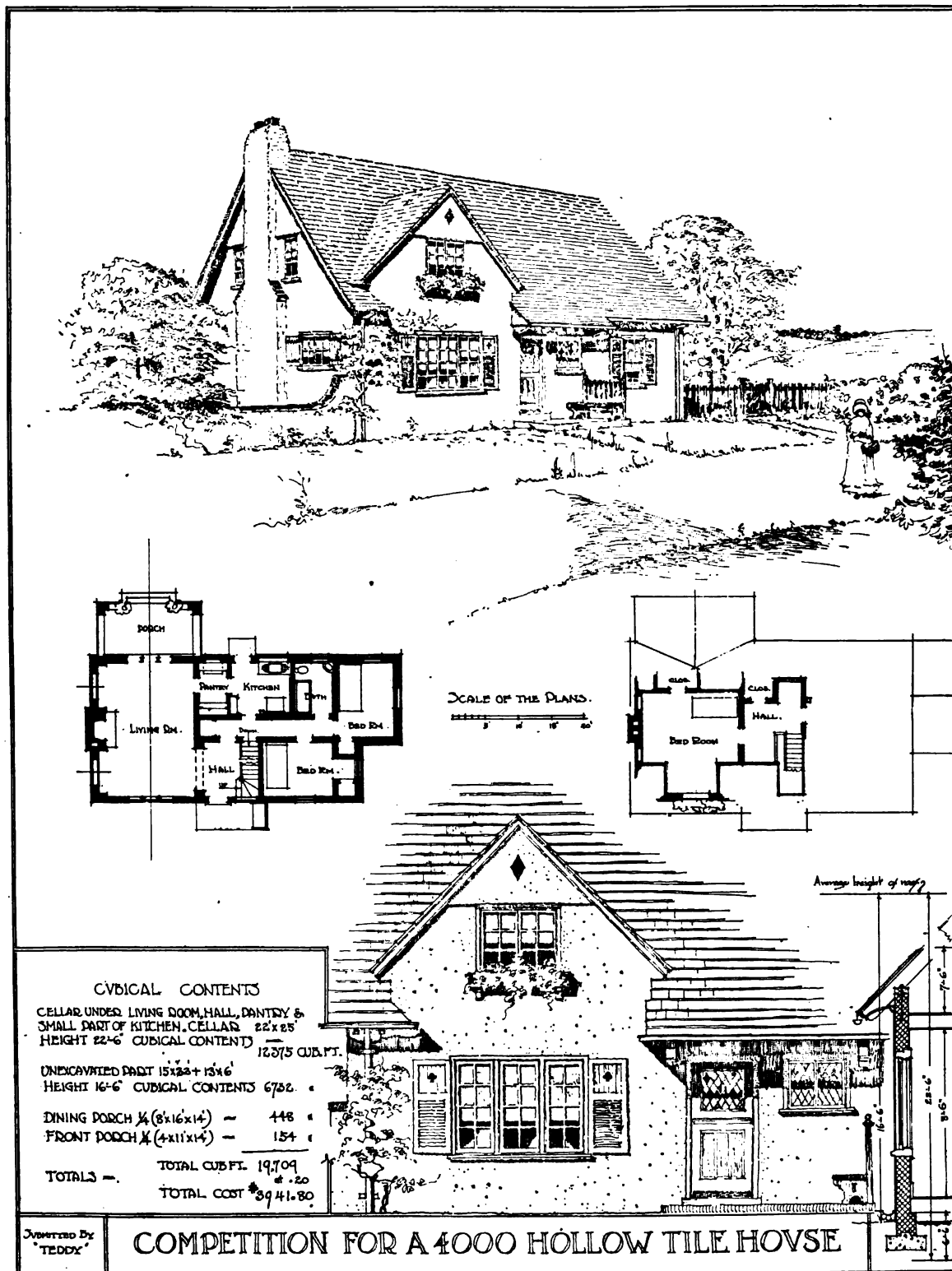
Design Submitted by E. F. Griffith and H. W. Peebles, Pittsburgh, Pa.





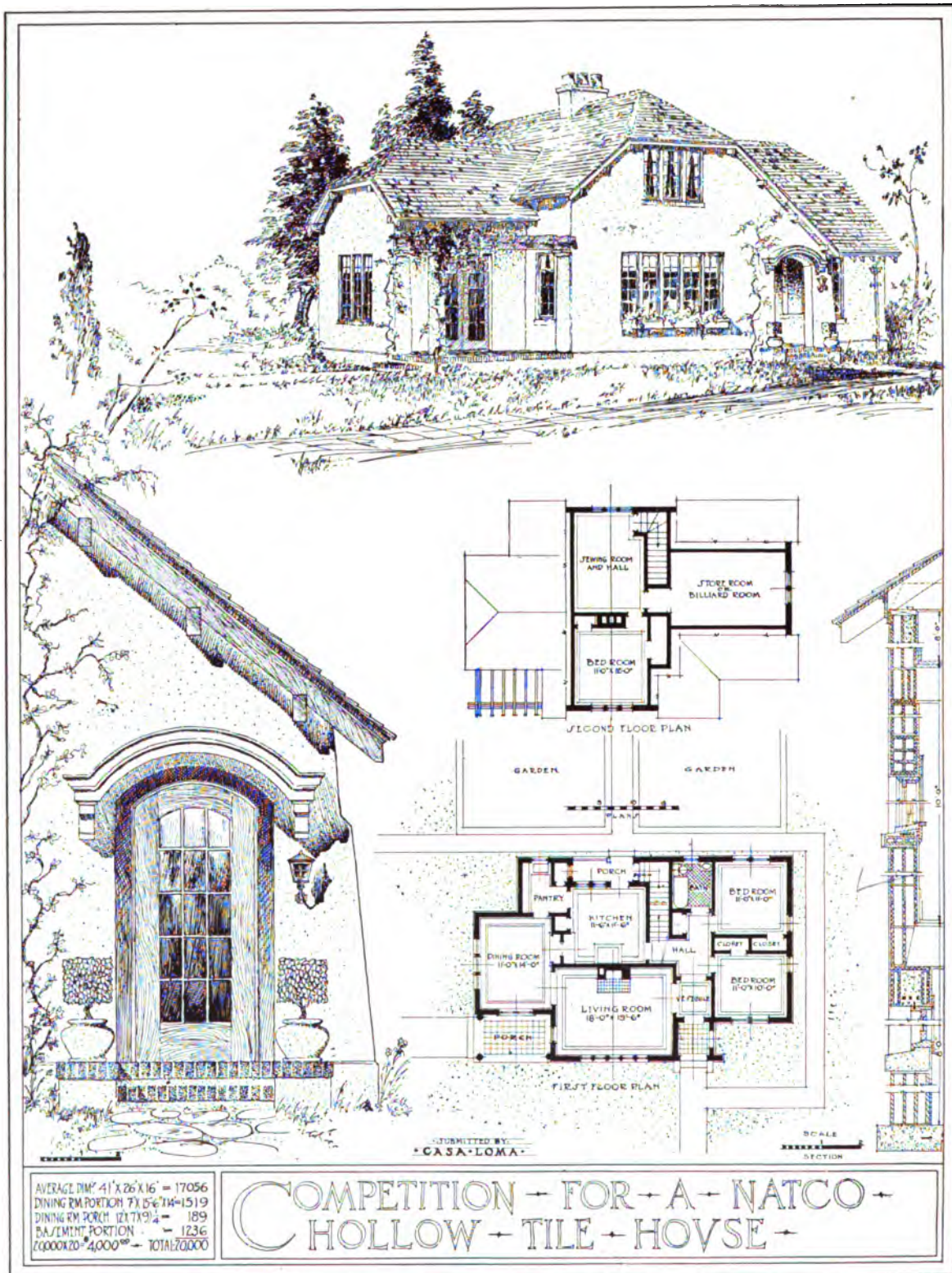
Design Submitted by John A. Weber, Washington, D. C.





Design Submitted by Edward Arnemann, New York, N. Y.





Design Submitted by Max Allen Van House, Burton, Wash.



**A** Series of attractive houses which have been built of Natco Hollow Tile. These houses were designed by a group of well-known architects.



## A Natco Tile House at Great Neck, L. I., N. Y.

(Illustrated on opposite page)

ALFRED BUSSELLE, ARCHITECT

**T**HIS house was built for one of the development companies that have been foremost to realize that good construction pays. In former times the house built for sale showed on its face about all there was to commend it, and even at that it was not considered necessary to pay for good design. Now, however, it is seen that the way to get the best returns is to select a few architects who seem to have best solved the country house problems in their private practice, and to assume that the man who chooses to buy his house ready made does not differ in what he demands and is ready to pay for, from the man who prefers to build "according to his own ideas." A house therefore to meet the demands of the average purchaser should be of the proper size and cost so that it can be sold for such a price as the neighborhood warrants. It should be planned for the average family, and should have a certain flexibility in the arrangement which will meet most criticisms in regard to the use of rooms by various members of the family. It should also bear the most suspicious inspection as to the material and workmanship, and if it can have the quality of being fireproof, or at least semi-fireproof, the purchaser feels that he could not hope to do better if he built for himself. Above all, it must be well designed so that a customer will pass over the many houses of similar size and price which are sure to be offered to him, and come back and buy this particular house.

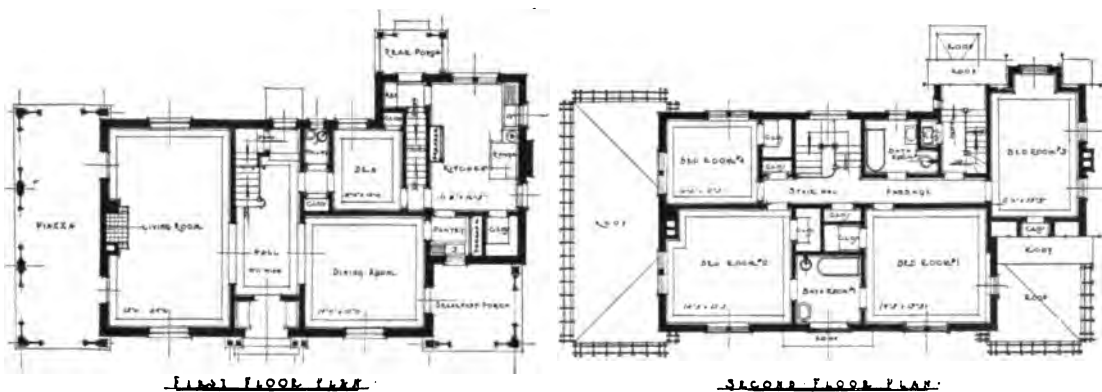
The first story of the house illustrated is built of hollow tile faced with brick, a construction which I have used several times in good sized houses in preference to a solid brick wall. The second story is also built of tile, although faced with stucco and half-timber.

The plan shows a den, or study, which in some families might be made a servants' sitting room; the bedrooms can be conveniently assigned to babies or guests.

The roof is of "thatched shingles," trimmed on the sides as they are laid so as to produce pleasing wavy lines.

There is a good attic, too, which is the hardest thing to arrange, and yet keep the house moderately low. Such a house for the present educated taste must be quiet in design and not vie with its neighbors and cry aloud for notice, but, like a good friend, improve on acquaintance.





# HOUSE AT GREAT NECK, LONG ISLAND.

Walls of Natco hollow tile with brick and half timber finish.  
 Alfred Busselle, Architect, 132 Madison Ave., New York, N. Y.



## A Natco Hollow Tile House at St. Davids, Pa.

(Illustrated on opposite page)

MELLOR & MEIGS, ARCHITECTS

**T**HE exterior walls of this house are of Natco hollow tile, eight inches thick. Plaster is applied directly to the face of the tile. The color of the plaster is cream white.

The roof is covered with green shingles and the window shutters are painted to match.

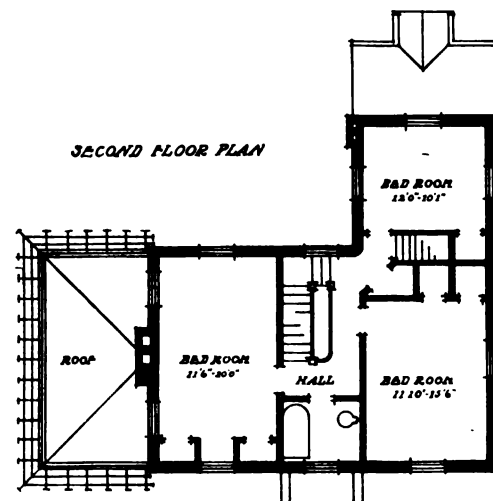
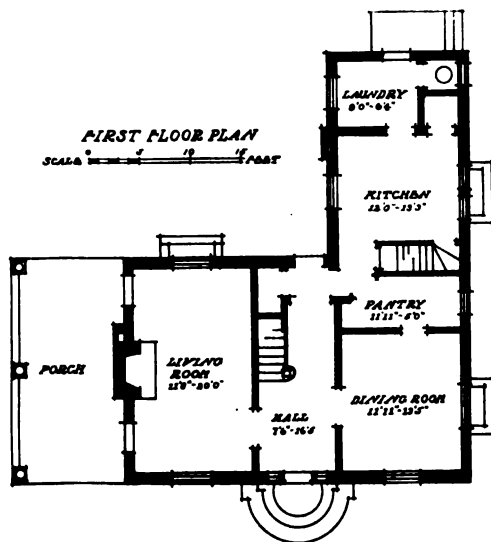
Economy in planning was here given more consideration than the treatment of the exterior.

The total cost of the house was less than \$7,000.



William J. Dolan, Del.





HOUSE AT ST. DAVIDS, PA.

Walls of Natco hollow tile with plaster finish.

Mellor & Meigs, Architects, 205 S. Juniper St., Philadelphia, Pa.



## A Natco Tile House at Larchmont, N. Y.

(Illustrated on opposite page)

CHAS. A. VALENTINE, ARCHITECT

**T**HIS house was erected at a cost of 25½ cents per cubic foot.

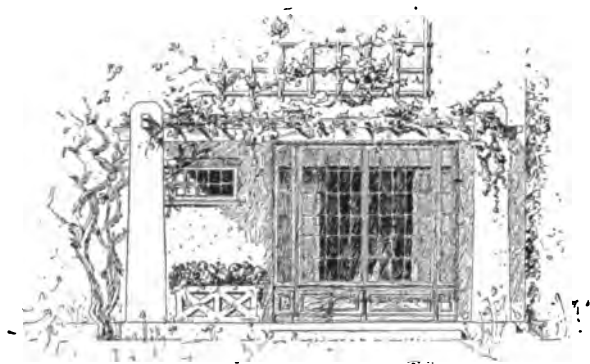
The foundations are of brick. All outer walls above the first tier are of eight-inch Natco tile with a four-inch veneer of brick. The stucco on second story is applied directly on the eight-inch tile.

Interior bearing partitions are eight-inch tile, supporting spruce floor beams. The entrance doorway, mullioned stairway, windows and trimmings are of lime stone. Porches are of brick with red quarry tile floors.

The style is Elizabethian.

The interior is executed in white pine trim throughout, with special Georgian treatment in main rooms of first floor.

It is my opinion that hollow tile is the most satisfactory material for houses of moderate cost. Properly constructed, such houses are warmer in winter and cooler in summer than frame, while the additional cost should not exceed 15%. The saving in cost over brick or stone is very considerable. As regards flexibility, the material lends itself readily to the proper combination of simple architectural parts, eliminating the necessity of ornament. In fact, the problem of providing durable, well constructed, and sympathetically designed homes of moderate cost has been greatly simplified by the architect.

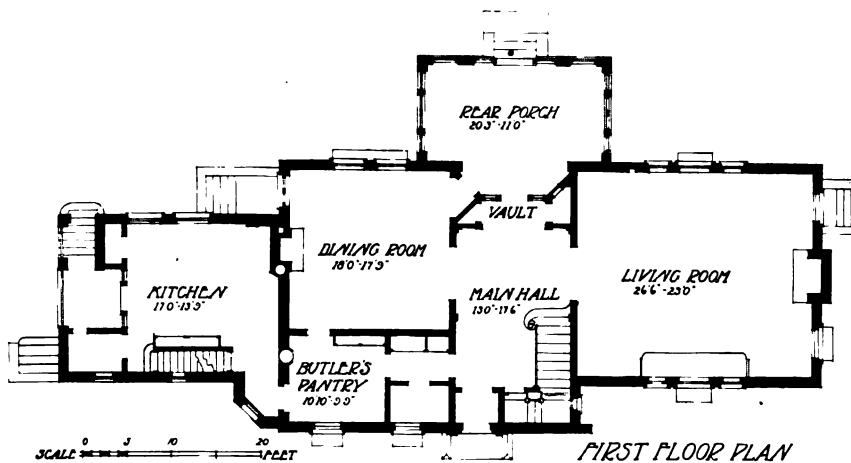
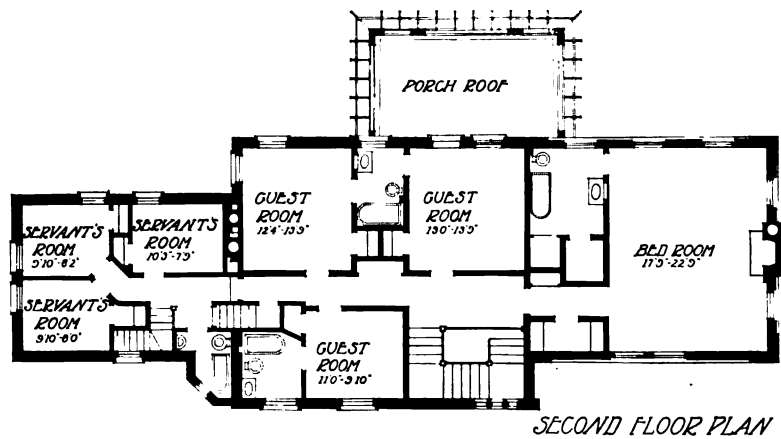


Charles Edward Bendernagel, Del.





HOUSE AT  
LARCHMONT,  
NEW YORK.  
Walls of Nateso hollow tile  
with brick veneer.  
Garden front.



C. A. Valentine,  
Architect,  
346 Fourth Ave.,  
New York City.



## A Natco Tile House at Langhorne, Pa.

(Illustrated on opposite page)

HARRY GORDON McMURTRIE, ARCHITECT

**T**HIS house was designed with the idea of securing the maximum convenience in the minimum space, it being approximately 31 feet wide and 30 feet deep.

The exterior walls above first floor line are built of 8" x 12" x 12" Natco tile, with smooth white stucco on the outside. The foundations are of local stone whitewashed between grade and first floor line. The roof is of shingles stained a dark green. The floor construction and interior partitions are of wood.

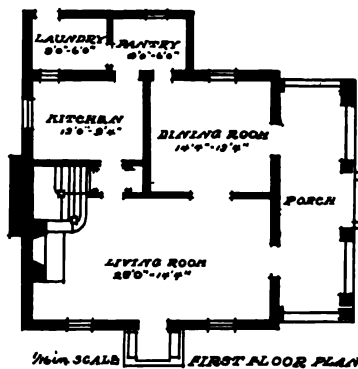
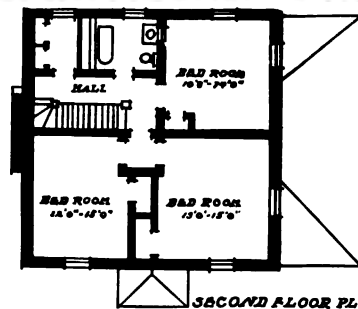
The living-room is finished in oak, stained a rich brown color; the dining-room and entire second floor are finished in white enamel and the balance of the house in yellow pine or cypress.

The cost of the house complete, including plumbing, heating, electric lighting, etc., was about \$6,500.



L. J. Cowley, Del.





HOUSE AT LANGHORNE, PA.

Walls of Natco hollow tile with plaster finish.

Harry Gordon McMurtrie, Architect, 1012 Walnut St., Philadelphia, Pa.



## A Natco Tile House at Bogota, N. J.

(Illustrated on opposite page)

J. C. VOORHIS, ARCHITECT

**I**N building this bungalow it was decided to use Natco hollow tile blocks for the reason that they cost little if any more than lumber.

As a result of the experiment the rooms have been easily kept warm in winter and they are cool and dry in summer.

Two coats of white cement were applied for an exterior finish, the last coat being floated and troweled. This gave a handsome finish which has improved with age; furthermore, the expense of repainting has been eliminated.

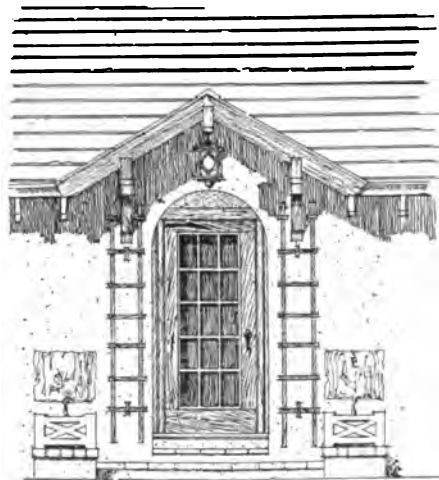
The principal rooms on the first floor have wooden panel ceilings.

Open plumbing is used throughout and there are vacuum pipes leading from the first and second floors to the cellar where they connect with a rotary air exhaust. By this means the house is kept free from unsanitary dust.

There is a large, open cellar in which is located the hot water heating plant.

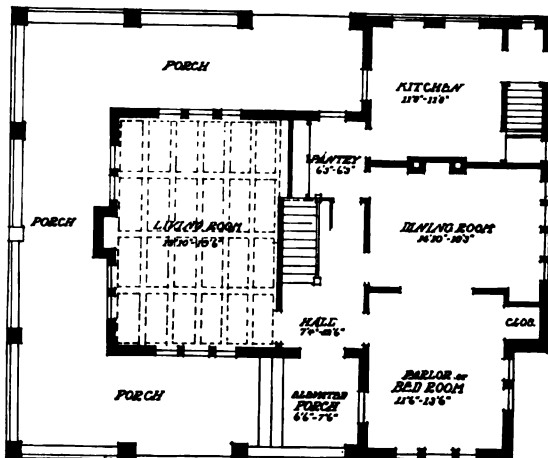
Although the house is two years old the walls are free from cracks.

The total cost of the house was about \$5,000.

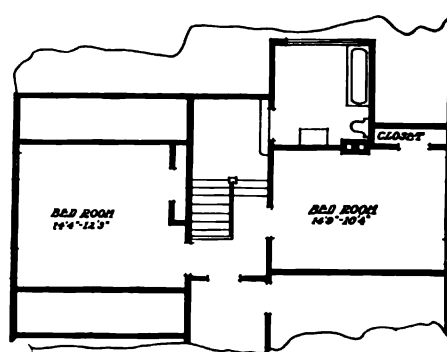


Frank N. Roberts, Del.





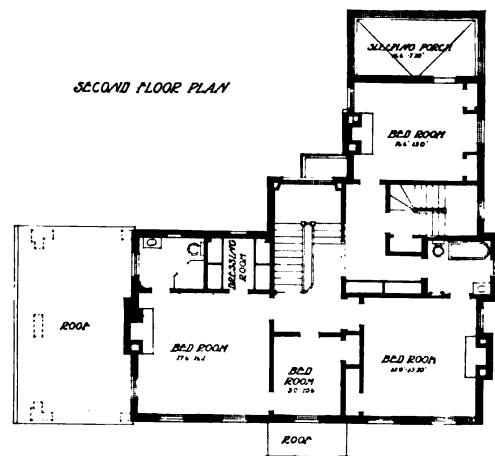
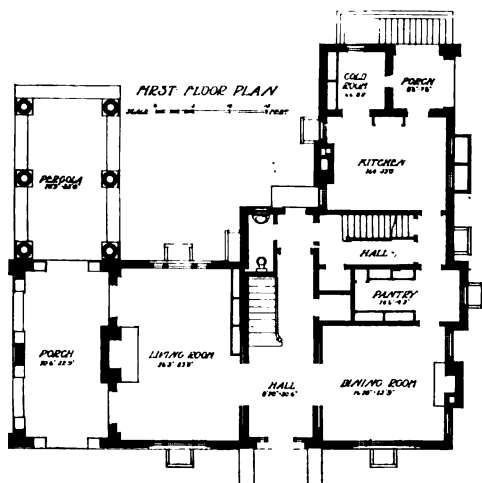
FIRST FLOOR PLAN



SECOND FLOOR PLAN

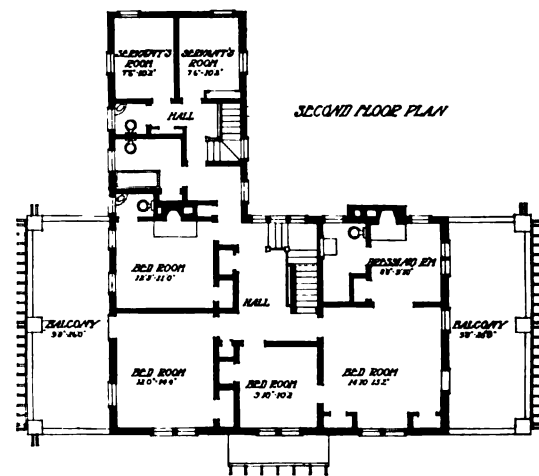
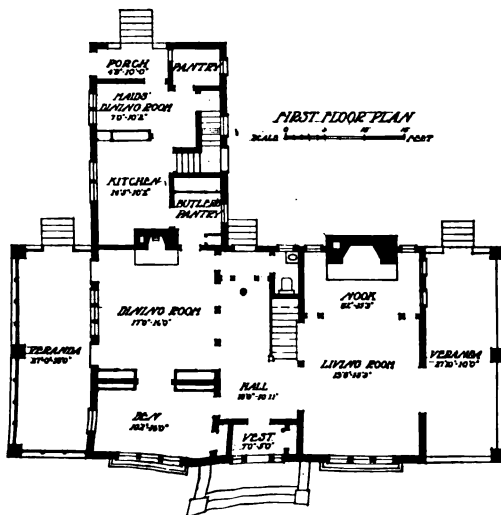
BUNGALOW AT BOGOTA, N. J.  
Walls of Natco hollow tile with plaster finish.  
J. C. Voorhis, Architect, Bogota, N. J.





HOUSE AT SEWICKLEY, PA.  
 Walls of Natco hollow tile with plaster finish.  
 Rutan & Russell, Architects, Magee Bldg., Pittsburgh, Pa.





### HOUSE AT DETROIT, MICH.

Walls of Natco hollow tile with plaster finish.

Albert Kahn and Ernest Wilby. Associated, Architects, 60 Lafayette Blvd., Detroit, Mich.



## A Natco Tile House at Tenafly, N. J.

(Illustrated on opposite page)

EUGENE WARD, ARCHITECT

**I**N designing this house it was necessary to observe three special conditions: the height of building was to be as little as possible; the lot frontage on street was curved, and there was an extensive view to the northwest or front of house. The angular plan allows an uninterrupted vista from all of the main rooms while the sloping lines of the roof adapt the building well to its site—an extensive slope.

The plan allows of direct service from the kitchen to all parts of the building. The second story rooms are of good size and have been found cool in summer owing to the large amount of window space.

All of the main walls above grade are of Natco hollow tile covered with white cement stucco. The dormers are stuccoed on wire cloth and the large stuccoed columns at porch have brick core. Porch floors and floors of store room and refrigerator room are of cement over 5 inches of concrete and 12 inches of cinders.

All rooms throughout the house, excepting kitchen, pantries and bath rooms, which have painted woodwork, are finished in chestnut stained a deep brown. All the main rooms have sand finished plaster tinted in dull colors.

The living room and hall have beamed ceilings.

Bath room fixtures are of a good grade of enameled iron. Hardware and lighting fixtures are simple in design and substantial. The house is heated by a first-class hot water system.

The chimneys are made of Natco hollow tile with stucco surface and are lined with flue tile. A judicious use of colored tiles was employed to relieve the monotony of the white stucco.

All of exterior woodwork of the house is painted a cream white except sash which is painted a dull green.

The total cost of house was approximately \$9,500.



Emil H. Kleeman, Del.





# HOUSE AT TENAFLY, N. J.

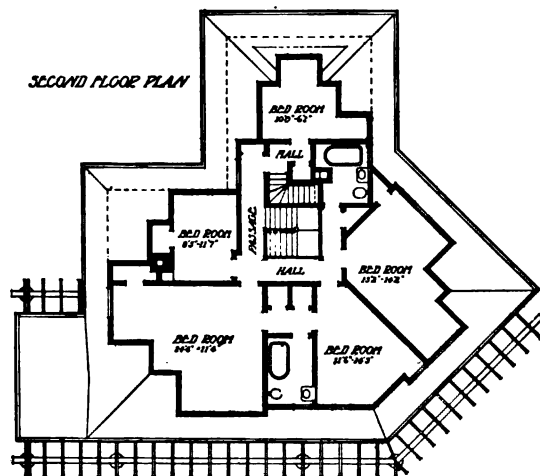
Walls of Natco hollow tile with plaster finish.

Eugene Ward, Architect, 11 East 24th St., New York, N. Y.

FIRST FLOOR PLAN



SECOND FLOOR PLAN





## A Natco Tile House at Detroit, Mich.

(Illustrated on opposite page)

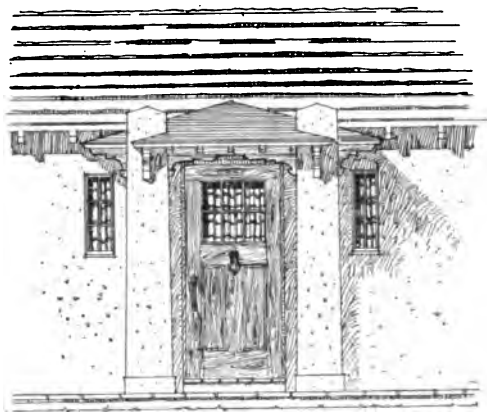
SLEE & BRYSON, ARCHITECTS

THE walls of this house are built of Natco hollow tile twelve inches thick, as required by the city ordinances of Detroit. The exterior is finished with stucco, tinted cream color and embellished with ornaments cast in cement. Over the entrance is a panel modelled after Della Robbia. The roof is covered with flat shingle tile of a soft blue-green color.

The hall is wainscoted with blinds which the owner had saved from an old house. The walls above the wainscoting are of imitation Caen stone, with corbels supporting oak beams and a wood ceiling. The drawing room is simple in design but suggests the Italian spirit as carried out in the exterior and is a quiet setting for a collection of very attractive pieces of furniture. The study room is trimmed in oak; the dining room in white wood, as is the remainder of the house.

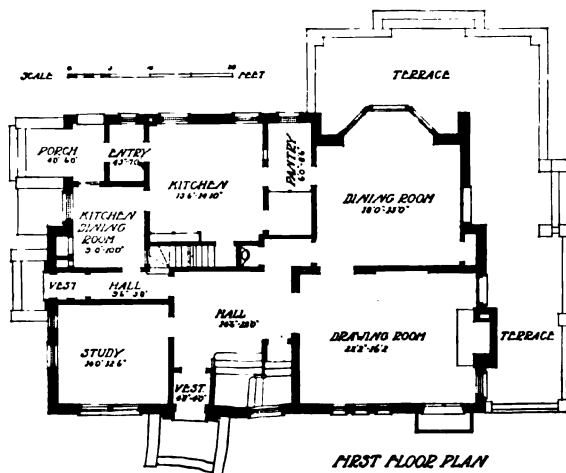
The generous out-door sleeping porch or balcony on the second floor is a feature of the plan and is effectively treated on the exterior with arches and columns cast in cement.

The cost of the house was about \$13,000.



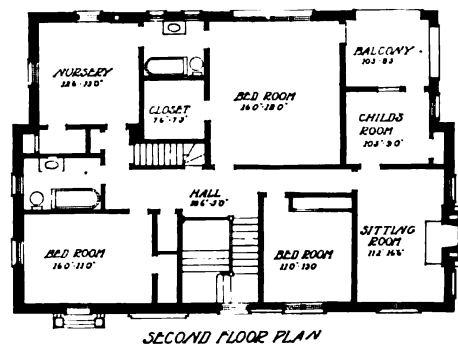
Sigmond Nesselroth, Del.





# HOUSE AT DETROIT, MICH.

Walls of Natco hollow tile with plaster finish.



*Slee & Bryson, Architects, 153 Montague St., Brooklyn, N. Y.*



## A Natco Tile House at St. Davids, Pa.

(Illustrated on opposite page)

MELLOR & MEIGS, ARCHITECTS

**T**HIS house has exterior walls of Natco hollow tile, plastered on the outside in a cream buff color.

The roofs are covered with shingles.

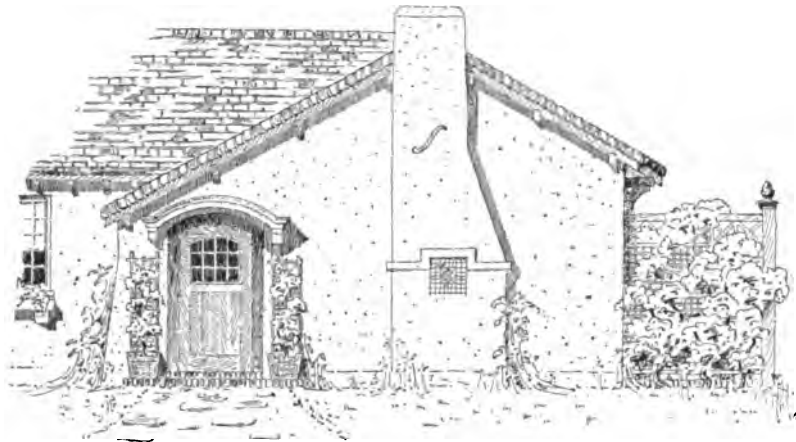
The hot water system is used for heating.

Oak is used for most of the flooring except two bath rooms which are tiled.

An odd feature of the plan is the servants' stairway which is concealed from the kitchen to the third floor with egress at the second floor if desired.

The porch runs on two sides of the house without taking the light away from any room that is not lighted from another point.

The total cost of the house was about \$12,000.

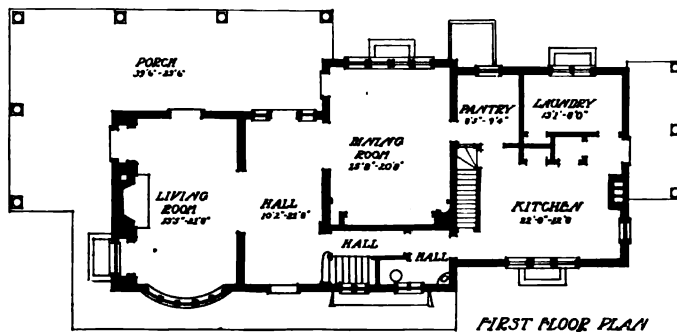
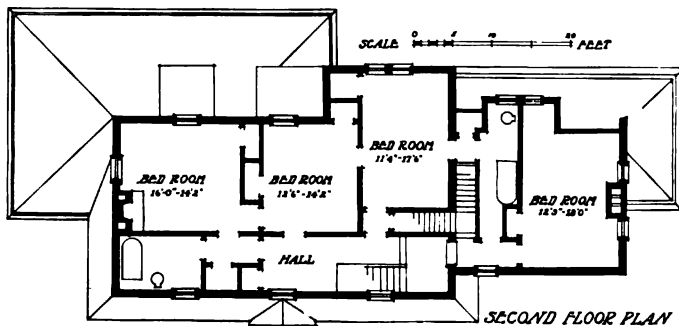


Henry W. Hall, Del.





HOUSE AT ST. DAVIDS, PA.  
Walls of Natco hollow tile  
with plaster finish.



Mellor & Meigs,  
Architects,  
205 S. Juniper St.,  
Philadelphia, Pa.



## A Natco Tile House at Forest Hills, Mass.

(Illustrated on opposite page)

KILHAM & HOPKINS, ARCHITECTS.

**D**URING the past year our suburbs have witnessed the inauguration of an intelligently directed attempt to create attractive habitations for a respectable class of citizen. These dwellings should prove an object lesson to many real estate promoters whose slovenly developments have, by their cheap and meretricious appearance and early deterioration, ruined so much of the country about our cities.

The house illustrated herewith is one of a group recently built in the development of a section of the Boston, Mass., suburbs — known as Forest Hills. A company organized to combat the unhealthy state of affairs now existing around the Massachusetts capital and to provide an example for investors, have established a suburb which by the nature and character of the houses erected are tending to improve and hold up real estate values in the vicinity instead of depreciating them.

An interesting fact in connection with the construction was the investigation of plans and costs in England where so many model villages have been built. It was found that a house at Letchworth, England, without cellar, hallway, closets, bath room, electricity or furnace, cost 15 cents per cubic foot, while this house, built together with ten others on what might be called the wholesale plan, cost no more and had everything the English houses did not, plus a slate roof.

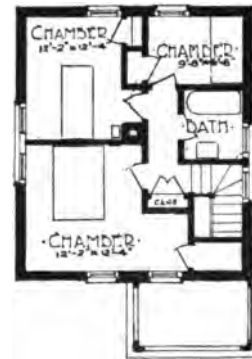
The outside walls of this detached house are built of Natco hollow tile plastered on the outside with cement stucco with a dash coat of a texture which harmonizes with the houses in the adjoining neighborhood. The gables are in half timber of the style of old English work. The roof is slate of a light sea-green color flashed and made tight with copper throughout. All the gutters are hung to prevent any chance of water getting in through the eaves of the house. The inside plastering is done directly on the backs of the tile, giving the air space feature so necessary in good construction, which in a brick house would have to be accomplished by use of furring strips. The house has an interesting fireplace in the living room with an attractive mantel feature. The dining room has a china cupboard with glass doors, also a dado with plate rail above, all stained in attractive tones.

The living room and hall are painted in white enamel which, with attractive staircase, gives a pleasant and cheerful appearance on entering the house.

The kitchens have ample sheathing dados with sink and double tubs arranged in the most convenient manner, with draining shelves, cupboards, etc. The pantry leads directly off the kitchen provided with shelves, etc., making a most serviceable and compact arrangement.

There are three bedrooms, each with a large closet, on the second floor and generous bath room.





SECOND FLOOR PLAN

HOUSE AT FOREST HILLS, MASS.  
Walls of Natco hollow tile with plaster finish.  
Kilham & Hopkins, Architects,  
9 Park Street, Boston, Mass.



FIRST FLOOR PLAN





## A Natco Tile House at Forest Hills, Mass.

(Illustrated on opposite page)

KILHAM & HOPKINS, ARCHITECTS

THIS house shows an intelligent selection of a style which is well suited to the use of Natco hollow tile for exterior walls. It is compact in plan and admirably adapted to terra-cotta block construction. The plain wall surfaces with the windows so placed as to give scale and dignity to the design are features which add to the building when seen in perspective.

While the house is practically square in plan there is no feeling of the "packing box" in the elevations. The house has been given architectural features by the sympathetic roofing and placing of windows and dormers. The recessed porch adds to the usefulness of the dwelling, and at the same time permits of architectural embellishment. It will be noticed that all the walls intersect at right angles with ample wall space to get good strong corners and support for window lintels.

This house adjoins the house described on the preceding pages and is one of the new Forest Hills group. It will be seen that both houses have about the same shaped plan and each combines the same features, yet without in any way resembling each other. It is only fair to both of these houses to say that they have only recently been erected and that the illustrations show the buildings without the shutters or certain domestic touches which of course will be added in the near future.

On the first floor there is a good sized living room and a somewhat smaller dining room which are joined together by a large doorway, each one helping the other give the appearance of an ample suite of rooms. The dining room has a high batten dado with plate rail and ornamental glass buffets. Opening from the dining room is the kitchen with its own pantry and back entry for refrigerator, etc. In front of the kitchen is the front hall which contains the staircase and an ample coat closet. This hall opens directly into the living room.

The second floor consists of three chambers with large closets opening off each one, a bath room fitted up with modern sanitary fixtures and up-to-date white steel medicine closet with mirror. There is a well-equipped linen closet in the upper corridor.

Above in the garret is space for storage.

The whole house is piped and wired for both gas and electric lighting.

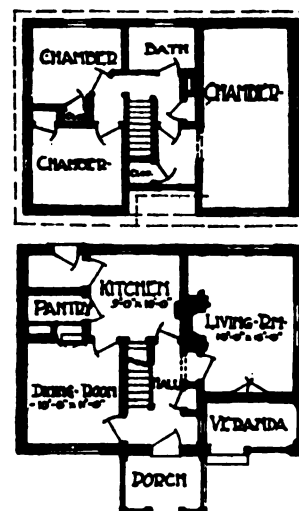
The floors throughout are of hard wood carefully finished and polished.

All windows and doors are provided with rustless bronze screens.





HOUSE AT FOREST HILLS, MASS.  
Walls of Natco hollow tile with plaster finish.  
Kilham & Hopkins, Architects,  
9 Park Street, Boston, Mass.





# Natco Hollow Tile

**T**WO scientifically established facts express the principal points of NATCO HOLLOW TILE for residence construction, viz:

1. Well burned clay cannot be destroyed by fire.
2. A dead air space is the best insulation against heat or cold and consequently the best protection against the destructiveness of high temperatures as generated in burning buildings.

It is worth while for both architect and owner to bear in mind that the kind of buildings herein illustrated and described are not only fire resisting, but are of

## ENDURING MASONRY CONSTRUCTION THROUGHOUT

That by reason of the indestructibility of the material and their substantial construction these houses

## COST FAR LESS FOR MAINTENANCE AND REPAIRS

than in the case with buildings of frame or brick and wood.

Floors of wooden joist construction warp and crack. Floors of Fireproof Hollow Tile endure for all time.

Exteriors of frame houses must be painted frequently, walls of Cement Coated Natco Hollow Tile, never.

Stucco applied over expanded metal has never proven satisfactory. Dampness will invariably work through and will cause the wood studs and siding to expand and settle. This will cause unsightly cracks to appear in the wall.

This difficulty has been eliminated by the use of Hollow Tile, which not only forms an ideal bond with the stucco, but furnishes a masonry wall which cannot settle.

Walls of wood or brick absorb, retain, and carry to the interior of the house the frosts of winter and the heat of summer. The air space in walls of Natco Hollow Tile furnishes complete insulation against atmospheric conditions, thereby reducing the cost of heating to a minimum, and buildings of this material compared with brick, frame, stone, concrete, or a combination of all four are

## WARMER IN WINTER—COOLER IN SUMMER

Houses with walls of brick, concrete or frame, and furred with wood, carry sound and vibration, and are subject to the penetration and ravages of vermin. Natco Hollow Tile Houses require no furring and are

## MOISTURE PROOF—SOUND PROOF—VERMIN PROOF

When it is considered that a residence with all these advantages and completely fireproof can be built at as low cost as one of brick, brick and wood, stone and wood, or concrete, and comparing favorably with frame, can there be any hesitation in adopting this modern method of construction?

In considering the illustrations and plans in this book it should be noted that they are simply types and examples of what has been and can be accomplished with Natco Hollow Tile, and the methods of construction in use to achieve these results.

A house of any desired size or architectural appearance may be built on the general ideas advanced herein. These ideas are offered as an aid to the architect in formulating plans for small buildings of substantial fireproof construction, and any architect can readily adapt these principles to any building which he may be planning.

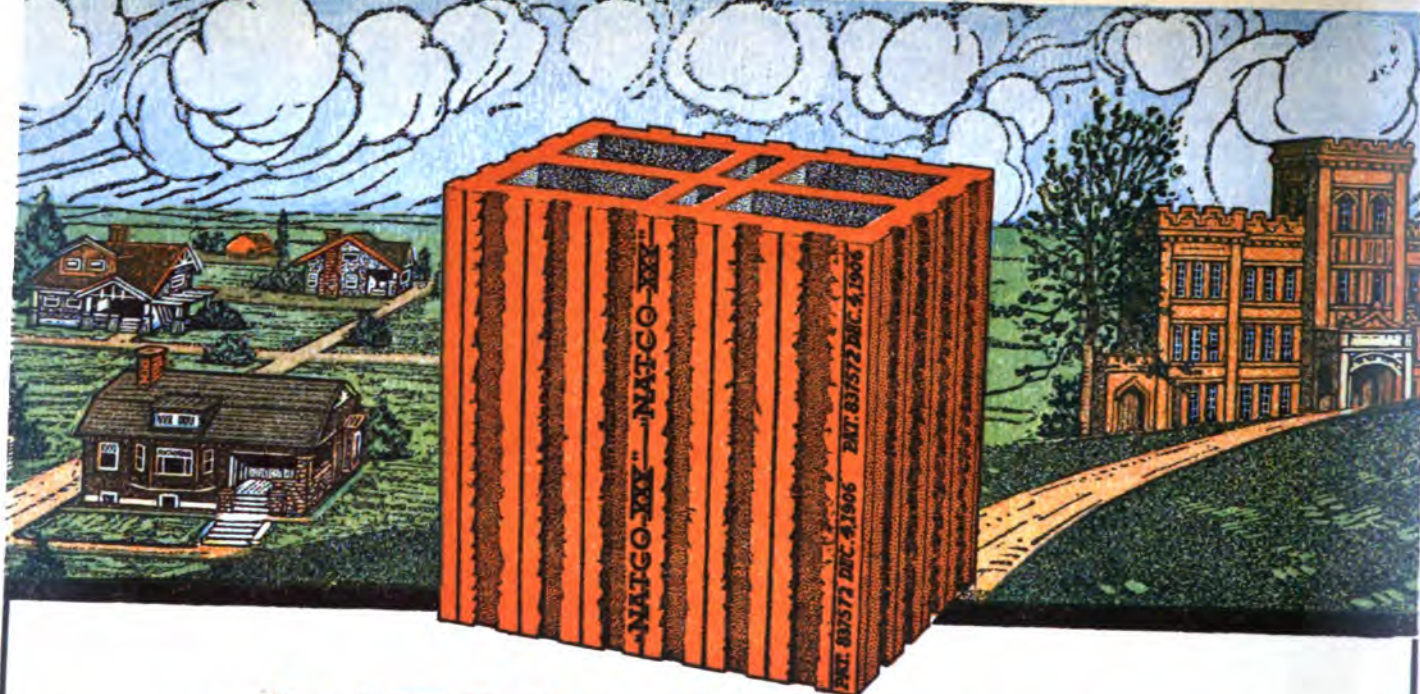
It will be seen that structural steel, which forms such a great item of cost in large, standard fireproof buildings, is entirely eliminated in buildings of the type considered in this work. The only manner in which steel is used at all in these buildings is in the shape of small tension members for reinforcing purposes.

It is this elimination of structural steel, and the simplicity of Hollow Tile construction, which makes it possible to build an enduring masonry residence fireproof throughout, within the limits of cost established by the average financial resources.









## IMPROVED **NATCO·HOLLOW·TILE** NATCO XXX

Embodying all the up-to-date improvements based upon our extended and extensive building experience.

**Natco** has always been far in advance as a fireproof, permanent building material for structures of any size, large or small.

In spite of the universal, unqualified satisfaction given by **Natco**, our experts have never ceased their endeavors to introduce improvements. From the very first, we have been most careful in the selection of the clays. We have constantly bettered the burning processes by the addition of the latest pyrometric devices. Graduate ceramic engineers have supervised all steps in the manufacturing. We have drawn upon our lengthy experience in the actual work of construction to bring the form of the **Natco Hollow Tile** block to positive perfection.

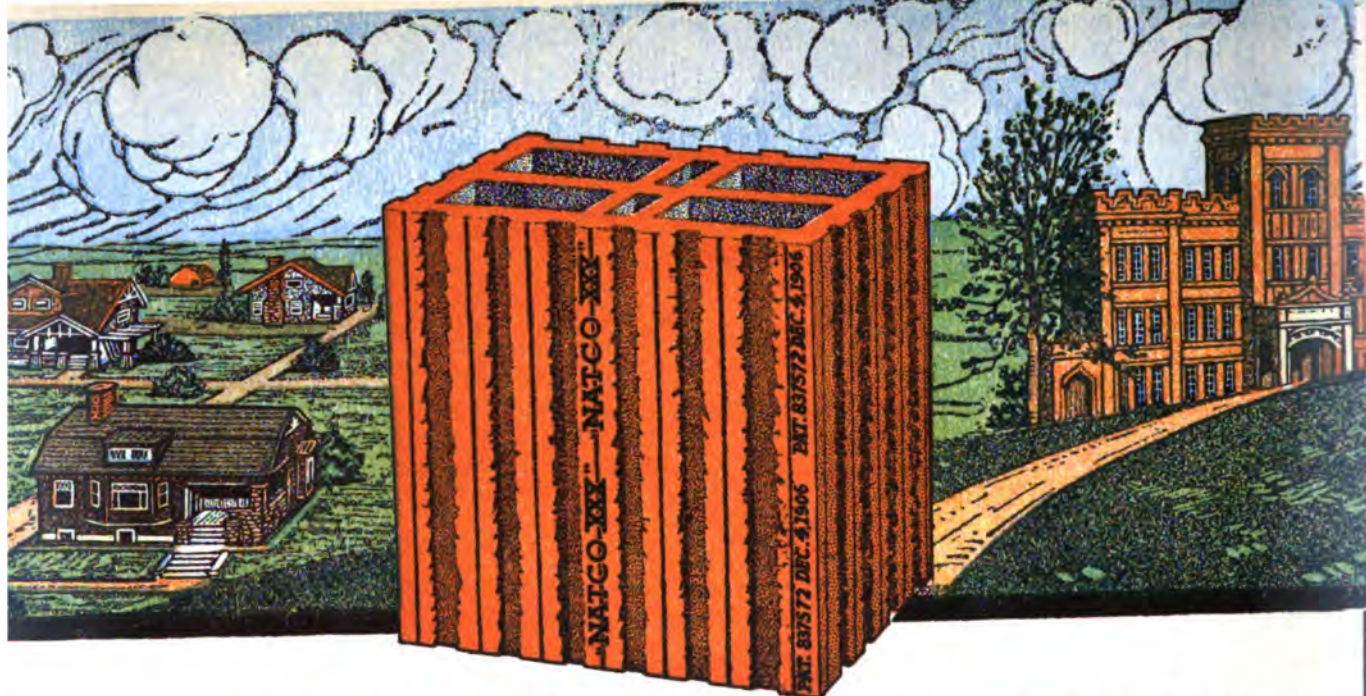
**Natco XXX** (patented) is the outcome of these efforts on the part of our manufacturing and building experts. It affords the utmost in structural stability—deriving further strength from the new design, which is such that both the shell and webs are always under compression in the completed wall. For every desirable quality, for that matter, **Natco XXX** sets a new standard. It cannot be too highly recommended for all forms of exterior wall construction.

**NATIONAL·FIRE·PROOFING·COMPANY·**  
NEW YORK                      PITTSBURGH                      CHICAGO









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